

10-1-36
R.H.P.
11
893665

6907

THURSDAY JANUARY 1, 1931

This is the beginning of a new year and we have much to do before we are ready to close up our work and head homeward. There was a light snow fall during the night, but even so it is clear and pleasant and not very cold for this season of the year.

We paged our field trip reports for August and September, thus completing our quarters report for the period July 1st., to September 30th, 1930. We also got out some letters and finished typing our field trip report for December 1930.

The quarterly report noted above contains something more than 900 pages and brings our paged type written/field trip report for the duration of the explorations for the period up to September 30th, 1930 up to 6019 pages.

FRIDAY JANUARY 2, 1931.

Left the Grand Hotel des Wagon's Lit's at 9.00 this morning and arrived at Mr. Chi's open air, winter storage yard of persimmons, at Haiang Tang, some 25 miles or so to the North of Peiping about 10.45. After the customary weekly morning greetings with Mr. Chi and others assembled in the yard we opened the trunk containing the clock and glass stem centigrade thermometers. The glass stem thermometer registered 2 degrees below 0 centigrade. The chart for the period from 11.00 A. M. Dec. 26, 1930 to 11.00 AM January 2, 1931 shows that between 6 and 9 o'clock Monday morning Dec. 28th., that the red and purple ink pens interfeared with each other and the

record for the two pens from that time until the chart was removed and replaced with a new one today, is perhaps unreliable. Such things are discouraging but in view of the fact that we do not see the thermometer but once a week, I am at a loss to know how to prevent such conditions. In this connection, the trouble appears to have been caused by a very small amount of the red ink, creeping out of the pen reservoir, perhaps through capillarity, and accumulating at the end of the pen arm. The clearance of the pens is very slight and enough ink accumulated to cause these two pens to engage and as a result, the true record of the two pens is unquestionably incorrect.

After changing the chart we also changed the red ink pen and did not fill the ink reservoirs quite full of ink. We are hopeful and really expect a perfect record when we get out again next Friday January 9th.

We find that the greater portion of the persimmons in the beds are frozen quite hard. The firmer fruit is, as has been the case ever since it was first frozen, frozen much harder than is the riper and softer fruit. Ripe, firm fruit freezes quicker, harder and with much less frost than does the fully ripe soft fruit. The ripe firm fruit will also remain frozen with temperatures under which the fully ripe normally soft fruit will defrost.

At 1.30 P. M. the glass stem thermometer, in the open registered 0. C. We inserted the bulb of this thermometer in a quite hard frozen persimmon and placed it in a shady place, at the end of 30 minutes the thermometer registered 4 degrees below 0. C.

Each week, for some time past, we have been purchasing 50 lb.

grade, large persimmons from Mr. Chi. We had him take this fruit from the bed in which we are making temperature records, thinking that there might possibly be some advantage in doing this. We select from these each week, at random 10 persimmons. These we number then after weighing and calipering each fruit they are placed in a small cotton bag and returned to the bed. We also select another 10 persimmons, at random from the lot purchased and after getting back to the hotel, number, weigh and caliper them. This fruit is then placed on a table in an attic room, where the heat is turned off and a window kept open. Each week new lots of fruit are procured and treated in this way and that previously gotten, and handled in this way is reweighed and calipered.

The total loss in weight of 10 persimmons weighed each week at the storage yard at Hsiang Tang, Dec. 13, 19, 26, 1930 and Jan. 2, 1931 and after each weighing was returned to the bed, was 36 grams, an average of 3.6 grams per fruit. For the same amount of fruit handled in the same way and on the same dates, at the hotel in Peiping the loss amounted to 285 grams or an average of 28.5 grams per fruit.

From the foregoing it appears that the 10 persimmons kept in a cool room at the hotel in Peiping lost 12.7 % more weight than did those returned each week to the bed in the storage yard at Hsiang Tang. It was also noted that the fruit in the storage bed keeps longer and remains in much better condition than that taken into the city and kept in a cool attic room in the hotel.

SATURDAY JANUARY 3, 1931.

A light mist has fallen, practically throughout the day and has frozen as it fell. As a result the sidewalks and streets are very slippery and traveling outside is not at all pleasant. We were surprised that it did not get colder, for at 6.00 P. M. the centigrade thermometer, hanging just outside of the window registered only 1 degree below 0 centigrade.

During the forenoon we roughed in our account for December and got it in readiness for typing. About 2.00 we brought down, from the attic room, two of the supply of Tamopan persimmons, 1st. grade, which we brought in yesterday from the storage bed at Hsiang Tang, for the purpose of trying to get definite data relative to their freezing and defrosting. At 8.00 P. M. the fruit appeared, if anything, a little harder than when they were put outside the window, on the sill, at 2.00 P. M. but were not frozen hard. The records concerning our handling of this fruit and the tabulated data of hourly readings from 2.00 P. M. when it was put on the window sill just outside of our hotel room window to 9.00 P. M. with tomorrows notes when we have completed our readings and observations on the two fruits.

Peter Liu, our Chinese interpreter, told us today, that in the course of his conversation with Mr. Chi and others, yesterday at the storage yard, he learned that prior to some 30 years ago, the persimmon growers of that region bedded their fruit down on kaoliang mats in the open, as they do today, only at that time the kaoliang mats were not on ridges as they are today but were flat on the ground.

and that with that practice of open air winter storage of the fruit the persimmons did not keep so well or so long as they do under the present ridge and furrow practice of storing. The change in the practice of storage has developed through observation and a series of evolutionary practices. Some one observed that the persimmons kept better and longer where the beds were on rough ground than where they were on smooth ground. This observation led to laying of small piles of kaoliang stems on the ground and placing the bed of kaoliang stems on these. This practice resulted the persimmons keeping much better and quite a little longer than that where the fruit was bedded on flat ground without anything under the beds of kaoliang stems. The cart ridge and furrow method, with the 3 or 4 inch woven mat of kaoliang stems rolled down over the ridges, the almost universal practice of today soon followed and apparently is efficient and extremely satisfactory.

NOTES FROM W. J. MORSE FROM TOKYO, JAPAN .

During the day we visited the Asakusa section for the purpose of looking up soybean products. The only new product found was soybean sugar wafers made in the Kyojo district. At one of the department stores, in the vegetable market section, we found small bundles of soybean sprouts and also small bundles of green vegetable soybean plants. There were only 6 plants to a bundle, about 8 inches long and with 6 to 8 pods per plant. The seed in rather large pods seemed only about one half developed. The variety appears very similar to the Early Buckshot or Early Ogeman which were grown in our northern States 30 years ago and were introduced from Japan, through the Office of Foreign Plants.

GENERAL PERSIMMON NOTES.

These general and detailed specific note on persimmons secured yesterday at the winter storage yard at Hsiang Tang may prove to be of interest even though a portion of the work did not result in the refreezing of some of the persimmons as we expected would happen.

Of the 50 persimmons, of commercial run of 1st. grade taken from the bed in which we are getting continuous temperature records, 10 were calipered, weighed numbered from 31 to 40 inclusive and placed in a small cotton bag and returned to the bed from which they had been taken January 2, 1931. With two exceptions the 10 persimmons were hard frozen, and the two exceptions were frozen considerably.

The 10 persimmons weighed at the Grand Hotel des Wagon's Lite in the afternoon were only considerably frozen when placed on a table in an attic room in the hotel, (Room with heat turned off and a window fully open) Room temperature $\pm$ 14 degrees C.

This morning all of the fruit brought in yesterday from the storage yard were defrosted.

Yesterday after we had finished numbering, weighing and calipering the ten persimmons and had placed them on a table we took two persimmons from our surplus supply down to the office for the purpose of getting if possible some information of the defrosting and freezing of the same. Having no means with which to do this work artificially we decide to try to accomplish the desired results by means of putting the fruit to be frozen on the window sill outside of the room we use for our office. The following is the results of our efforts in this connection.

XXXXXX

Peiping, China,
January 3, 1931.

Mr. Knowles A. Nyerson,
Principal Horticulturist in Charge,
Foreign Plant Introduction,
Bureau of Plant Industry,
U. S. Department of Agriculture,
Washington, D. C.

Dear Mr. Nyerson:

A few days ago we received a letter from Dr. H. Nagai, Acting Director of the Imperial Horticultural Experiment Station at Okitsu, under date of December 20, 1930, advising that he was sending us a box containing scions of 24 varieties of persimmons.

After dinner on the evening of December 30th, we received a notice from the post office that they had a parcel post package for us. We arranged at the hotel desk to have it sent for the first thing Wednesday morning.

On looking over the morning paper on December 31st, we were surprised to find a notice to the effect that the post office would be closed on the 31st as well as January 1, 2, 3 and 4th. Shortly after reading this notice the hotel office boy came up to report that the post office was closed and that they could not get the package until Monday, January 5th. We sent Liu down to see what he could do and about 10:30 he came back and reported that he was not able to get the package.

We then took parcels 29-P, 30-P and 31-P to the American Legation and got them in the diplomatic pouch which left the Legation about 11:30 a.m. I saw Mr. Ellis, 2nd Secretary of the Legation, and told him the situation. I explained that it was a very valuable shipment of persimmon scions and that it was exceedingly important that we get them. He got the phone going and in about twenty minutes gave me a note and card to a Mr. Greenfield, an official in the post office. Liu and I went over post haste to see him before he left for tiffin.

Well, I am pleased to say that we got the box of scions, but too late to catch the pouch, and owing to the four days' holiday, cannot get them on their way before Monday, January 5, 1931. However, they are repacked and stored in a cold room. We will send them by commercial parcel post.

Parcel #32-P.

Mr. E. A. R.

-2-

1-3-31.

This package contains Diogenes Roki scions under the following numbers:

7641, 7643, 7644, 7647, 7648, 7653, 7654, 7655, 7659, and 7661.

Parcel #33-P contains the following numbers:

7638, 7640, 7642, 7645, 7649, 7651, 7652, 7656, 7657 and 7658.

Parcel #34-P contains a few numbers and several other things as follows:

#7639, 7646, 7650 and 7660. Also:
1 copy of Standard Colors, Ridgway.
1 Tropical Gardening, Macmillan.
1 Commercial Travelers Guide, U. S. Dept. Commerce.
1 American Photography, Vol. 19, 1925.
2 Herbarium press straps.

Please have the books held for Dorsett.

The collection of Japanese persimmon scions embrace seven non-astringent varieties. I am inclosing Mr. Nagai's letter which may be of interest and also of assistance in connection with writing up the varieties there. Mr. Nagai gives the Japanese characters for each lot of scions.

We trust that this shipment gets through in good shape and that Mr. Cuning and Mr. Goucher will be able to save them all.

We are sending the second sheet inventory cards under separate cover by mail.

Very truly yours,

F. H. Dorsett,
Agricultural Explorer,
Dorsett & Morse Agricultural Expedition.

FHD/rd.
Incl.

LARGE TAMOPAN PERSIMMON.

Fruit #1 at 1.52 P. M. weighed 308 grams

Thickness 2 and $2/16$ "

Short diameter 3 and $9/16$ "

Long diameter 3 and $10/16$ "

Short diagonal diameter 3 and $13/16$ "

Long diagonal diameter 3 and $13/16$ "

Outside temperature ± 1 degree Centigrade. Temperature of fruit ± 14 C.

These were the conditions when the fruit was put out on the window sill.

Between 3 and 3.05 the temperature outside was ± 1 C. of fruit ± 10 C.

"	4	"	4.05	"	"	± 1 C.	"	± 5 C.
"	5	"	4.05	"	"	± 1 C.	"	± 4 C.
"	6	"	6.05	"	"	± 0 C.	"	± 2 C.
"	7	"	7.05	"	"	± 0 C.	"	± 1 C.
"	8	"	8.05	"	"	± 0 C.	"	± 1 C.
"	9	"	9.05	"	"	± 0 C.	"	± 0 C.
			8.40 A.M. the 4th.	"	"	± 2 C.	"	0 C.
			9.00	"	"	± 2 C.	"	0 C.
			10.00	"	"	± 2 C.	"	± 2 C.

At 9.00 A. M. after practically an all night temperature of 0 this fruit was not frozen and insofar as this one trial was concerned the experiment availed little of anything in so far as the refreezing of the fruit was concerned.

SMALL TAMOPAN PERSIMMON.

Fruit #2 at 1.56 P. M. weighed 103 grams.

Thickness of fruit 1 and $14/16$ "

Short diameter 2 and $14/16$ "

Long diameter 3 and $2/16$ "

Short diagonal diameter 3 and $2/16$ "

Long diagonal diameter 3 and $3/16$ "

Temperature of fruit when put out ± 17 C.

Between 3.10 and 3.15 The temperature outside was ± 1 C. and of fruit ± 7 C.

"	4.10	"	4.15	"	"	± 1 C.	"	± 5 C.
"	5.10	"	5.15	"	"	± 1 C.	"	± 3 C.
"	6.10	"	6.15	"	"	0 C.	"	± 1 C.
"	7.10	"	7.15	"	"	0 C.	"	± 1 C.
"	8.10	"	8.15	"	"	0 C.	"	± 1 C.
"	9.10	"	9.15	"	"	0 C.	"	0 C.
			8.50 A.M. Jan. 4th.	"	"	± 2 C.	"	0 C.
			9.00	"	"	± 2 C.	"	0 C.
			10.05	"	"	± 3 C.	"	± 2 C.

At 9 A. M. after practically an all night temperature of 0 this fruit, like the other one, was not frozen and the results, as in that case are the same.

TABLE 1. - Summary of results of the investigation of the effects of the application of the various types of fertilizer on the growth of the various types of plants.

Fertilizer			
Type of plant			
Growth			
Height			
Weight			
Color			
Texture			
Taste			
Smell			
Other			
Remarks			
1.00	1.00	1.00	1.00
2.00	2.00	2.00	2.00
3.00	3.00	3.00	3.00
4.00	4.00	4.00	4.00
5.00	5.00	5.00	5.00
6.00	6.00	6.00	6.00
7.00	7.00	7.00	7.00
8.00	8.00	8.00	8.00
9.00	9.00	9.00	9.00
10.00	10.00	10.00	10.00

At 10.00 A. M. after germination, all the plants were of the same height and weight and in color as the first and were numbered 1 to 10 in order of growth in the first row.

TABLE 2. - Summary of results of the investigation of the effects of the application of the various types of fertilizer on the growth of the various types of plants.

Fertilizer			
Type of plant			
Growth			
Height			
Weight			
Color			
Texture			
Taste			
Smell			
Other			
Remarks			
1.00	1.00	1.00	1.00
2.00	2.00	2.00	2.00
3.00	3.00	3.00	3.00
4.00	4.00	4.00	4.00
5.00	5.00	5.00	5.00
6.00	6.00	6.00	6.00
7.00	7.00	7.00	7.00
8.00	8.00	8.00	8.00
9.00	9.00	9.00	9.00
10.00	10.00	10.00	10.00

At 10.00 A. M. after germination, all the plants were of the same height and weight and in color as the first and were numbered 1 to 10 in order of growth in the first row.



#46437- *Mospyros* sp.. Chinese Kaki persimmons, Tanopan, January 2, 1931. Taken at the storage yard of Mr. Chu Li Chi, in the village of Hsiang Tang, some 25 miles to the North of Peiping. The basket of persimmons held by Dorsett are from the bed on his left. This is the bed the clock temperature records are being made in. Over Dorsett's right shoulder in the background on the other side of the bed may be seen a part of the trunk in which the clock thermometer is installed.



101 5.11.02

#46438, Diospyros kaki, Lantern persimmon. An agricultural explorer cutting scions from this tree for forwarding to America for trial. This is one of the numerous Persimmon orchards in the vicinity of the village of Hsiang Tang, some 25 miles to the North of Peiping, where upwards of 10,000,000 large seedless Tamopan persimmons were stored in the open on the ground, for the winter.

The Tamopan or large and Lantern, small persimmons are the only two commercial varieties grown in the region of Peiping, China.



46439- *Diospyros kaki*, Panther persimmon, Jan 2, 1931. The U. S. Agricultural Explorer is putting into a bundle to be temporarily wrapped for packing later the scions cut from the tree by which he is standing. See picture 46438. Scions of this variety have been sent into the Department of Agriculture at Washington under #7489.



#46440- Orchard view with one of the U. S. Department of Agricultural explores with his 5 X 7 camera ready for a picture. This picture was made Jan 2, 1931 in a persimmon orchard near the village of Hsiang Tang, Chihli China. This is one of the large persimmon growing regions in the vicinity of Peiping.



#46441- Populus sp. January 2, 1931. This is one of the whitest bark, white-bark poplars we have seen, either in Japan or in Northern China. Dorsett cutting young sprouts for cuttings to send into Washington for trial. This group of plants are growing just off of the road from Tang Shan to Hsiang Tang. The cuttings went forward to Washington under #6723 and it is hoped that in case they arrive alive and grow that the introduction may prove both interesting and valuable.



#46442- Populus sp. White-bark Poplar. Jan 2, 1931. This is the same group of trees shown in picture 46441 but somewhat nearerby and Mr. Peter Liu our Chinese interpreter is in this picture. This species of poplar if it succeeds may prove to be of interest for ornamental plantings. D & M

SUNDAY JANUARY 4, 1931.

Spent practically the entire day in getting things and material not needed packed away in our trunks so that we will not be so badly rushed later on when the time to leave comes.

Dr. Yami Kin called about four oclock in the evening and found us in our old cloths and our room at the hotel in a mess but it could not be helped for it was work that had to be done and could not well be delayed.

After the snow-fall of a few days ago we were expecting it get cold but outside of being cloudy the weather is delightfully pleasant. The open season, we fear will result in the persimmon storage beds in the open in the foot-hills give out considerably sooner than otherwise would be the case. We are in hopes that the beds will run, at least to March the first, but owing to the present weather conditions doubt if this will be possible.

MONDAY JANUARY 5, 1931.

In order to gain time we had Peter Liu take Parcel Post Packages #1's 32 P, 33 P and 34 P over to the city post office and send them by commercial post via Seattle to Washington. By doing this we will save more than a weeks wait here and beside will also save time on the Ocean because the rout via Seattle is several days shorter than via San Francisco. While Mr. Liu was attending to this matter I took our Special Passports over to the American Legation to have them renewed. They expire February 6, 1931. Mr. L. Ellis, second Secretary of the Legation said that he would

attend to having them renewed and would also see that they were visse'd at the Japanese Legation. From the Legation I went to the Hartung Photo Shop to get some work left there a few days ago, this was the pictures made last Friday at Hsiang Tang and included some of the pictures of myself in exploring costume. They were requested in a recent letter from Mr. Knowles A. Ryerson.

We left Paiping for Tientsin on the 4.20 train and arrived there about 7.30 P. M. Our trip to Tientsin was made primarily for the purpose of getting material and such information as we could about the fiber plant "Ching Ma" Abutilon avicennae. This fiber is grown in considerable quantity in that region and Tientsin is reported to be the second largest exporting port for Ching Ma in China. We will also keep our eyes open for any new and interesting soybean products so as to increase the size and importance of our already quite extensive collection.

NOTES BY MR. W.J. MORSE, TOKYO, JAPAN.

Today has been Miso day as we have devoted the entire day to looking up soybean miso preserved products. We found many kinds of miso preserved fish in certain sections; while in others we found saki mash preserved fish and none preserved in miso.

In all cases white miso was used and in case of small fish the entire fish was preserved, such as the Tai or Tuna, Salmon and other small cuts are used. Miso preserved fish is always boiled.

Another miso meat preserving place was found and the Kobe method of preserving used. Thin slices of beef were preserved in white miso and packed both in small tubs and boxes

January 5, 1931.

The proprietor said that he saw no reason why red miso could not and also thought that pork could be preserved in red or white miso as well as beef. If we desired he would preserve some pork for us in red and white miso and beef in red miso. He said that during the cold months beef preserved in miso would keep about a month and was ready for use in 10 or 15 days. As stated at other places and as with miso preserved fish, the meat is always broiled.

We are in hopes of sampling some of this miso preserved meat before leaving Japan. At several stores we found Yuba in abundance, moreso than last season. A number of different forms of miso Yuba were found at one store, among which was one we had not observed before.



#46443- Soja max, Meat and fish preserved in White Miso. Tokyo, Japan Jan.5, '31. Right to left, fish, salmon and steak and sliced beef. Tai-fish, beef and several other kind of fish are preserved in white miso. These food are ready for use after being preserved 10 to 14 days. IN cold weather they will keep about 30 days.

THURSDAY JAN. 6, 1931.

Tientsin, China. It was really biting cold when we went out this morning in search of Ching Ma products and information. We stopped first at a rope makers establishment, Mr. Tien Ho Hsing, after getting samples of small twine and small rope made of Ching Ma and also some of the raw fiber, we learned from him that a really nice imitation silk is made from this fiber and also that the stems are converted into charcoal and use in the making of powder for the manufacture of the Chinese noisy firecrackers.

Mr. Tien Ho Hsing told us that for the past two years Ching Ma fiber has been selling for \$12.00 Mex per 100 catties, about 125 pounds. The price of hemp rope and twine in comparison to Ching Ma rope and twine is as follows.

1/2"	to 1/2"	hemp fiber rope sells at	\$30.00	per 100 catties
1/2"	" 1/2"	Ching Ma fiber rope	" 15.00	" " "
3/4"	to 3/4"	hemp fiber rope sells at	\$35.00	M. " "
3/4"	to 3/4"	Ching Ma rope	" 15.00	Max " "

From Mr HO's we went to the Hua Sheng Cloth Factory, where they were weaving imitation silk out of Ching Ma fiber. For the most part the Ching Ma imitation silk and other fabrics is woven in bolts about 30 to 32 inches wide and 52 feet in length and sell wholesale at \$10.00 to 15.00 Mex per per bolt. The men running the looms receive from \$15.00 to \$20.00 mex per month. The higher price is paid to the best workmen, who as a rule turn out 2 bolts in 3 days. This price includes board. The women and children, winding Ching Ma thread, working 10 hours per day receive 30 to 40 cents mex per day and feed themselves.

JANUARY 6, 1931.

We secured three samples of thread from the Hua Sheng Cloth Factory people. One of cotton imported from Japan, which is used as the warp when fabrics composed of Ching Ma fiber and cotton are made. We also secured two hanks of Ching Ma fiber thread, both imported from Japan; one soft and silky, the other rather hard and stiff. This latter, we understood is treated here in Tientsin by the Chinese, with a secret glue preparation to make it suitable for use as the warp in the weaving of fabrics made wholly of Ching Ma fiber.

We found that Imitation silk, satin, taffetas etc., made in part or wholly of Ching Ma are of numerous attractive colors and designs. We were told that the fiber is dyed before the fabric is woven.

From this manufacturing establishment we went to a commercial establishment making a specialty of retailing Imitation silk fabrics made in part or wholly of Ching Ma fiber and secured quite a number of samples, for we imagine this material may be new at home and if so we feel reasonably certain that it will prove to be of considerable interest to Mr. Dewey and other interested in fibers and fabrics.

These fabrics, made wholly or in part of Ching Ma fiber, we find are extensively used as women's dress goods, also for men's coats, men and women's trousers and for linings of coats and cloaks. The retail price ranges, according to quality, from 30 to 45 cents per running foot, 30 to 32 inches in width, for all Ching Ma; 25 cents per running foot of the same width for Ching Ma and cotton and as much as 95 cents per running foot, 30 to 32 inches in width, for Ching Ma and silk made fabrics.

We secured 10 or a dozen good size samples, including those made wholly of Chingma, silk and Chingma and cotton and Ching Ma and saw to it that these were in different colors and of different design. The large samples, we felt would serve to show the fabrics off to better advantage than small ones and besides would also serve the purpose, in case it was deemed advisable, of working up into pillow covers or other products for trial as to its durability and general economic importance.

We understood that Ching Ma fiber is used in the manufacture of coarse bags but were not able to find that this fiber was being used in Tientsin in the making of bags, burlap or mats.

The dried stalks of Ching Ma are used for fuel and sell, normally for this purpose and also for converting into charcoal, for \$12.00 Max per 100 catties. The charcoal made from the stems of Ching Ma or Abutilon avicennae, is used for making powder, used by the Chinese in the manufacture of their noisy firecrackers.

The charcoal is made in small villages, usually in or closeby the regions where Abutilon avicennae or Ching Ma is grown, we hope to be able to locate kilns wher the stems are converted into charcoal and also to get a sample of the charcoal as well as some of the powder made with this charcoal.

The Charcoal may be of interest to the War and Navy Departments, at least we hope to be able to secure a sample of sufficient size to enable the Office to send samples both to the War and Navy Departments for experimental trial.

Yokohama, Japan, January 6, 1931.

Notes by W. J. Morse.

Left for Yokohama in the morning to visit the shipping firm Haratetsu Express Co. concerning the boxes shipped from Dairen to Yokohama for reshipment to Mr. F. B. Brosius at San Francisco. This Company plans to ship the boxes on the Dollar Line Jan. 20th., and will handle the entire matter, rendering the bills of lading as soon as the shipments can be made.

After our visit to the Haratetsu Express Co. we went to the Sakata Seed Co. Mr. Sakata is at present making another tour of the United States and Europ. We were anxious to gather more information about kudzu seed. No kudzu seed is sold in Japan, the demand coming from European countries and America. In the past most of the seed has been collected in the Asama district, near Karisawa and in the Mt. Fuji region. During the past season considerable seed was collected in northeastern Chosen. The Sakata Seed Co. has agents in various regions and has then make collections of seed as desired.

As the kudzu seed proposition is rather an uncertain one, the Co. asks that orders be placed previous to October. They as a rule do not collect many more kudzu seed than are required to fill orders received prior to that date. This season, however, they want a little larger collection due to the demand last season and have now a surplus of about three hundred pounds. About one thousand pounds of kudzu seed is sold annually and this season is selling for \$2.00 per pound.

Wednesday June 7, 1931.

It was still quite cold this morning when we started out to visit the retail market in the French Consession. We found the market

installed in a two story concrete building. The building houses in addition to fruit and vegetable stands also those for fish, meat and flowers. The building is more or less open and this morning, as at any other time in cold weather, is quite cold. The products on many of the stalls were covered, in part or wholly with heavy cloth or grass matting pads and even so much of it was quite hard frozen.

The following is a fairly complete list of the fruits and vegetables found displayed on the stalls for the retail trade.

Vegetables.

Chinese cabbage & brassicas, in var.
 Radishes in var.
 Stem lettuce,
 Carrots
 Cabbages, American white & purple.
 Onions, bulb and fresh.
 Leeks, in var.
 White potatoes.
 Pumpkins in var.
 Dioscoreas,
 Bamboo shoots.
 Peppers.
 Dasheens.
 Bean sprouts, in variety.
 Cauliflower,
 Coriandrum, (Water celery)
 Cucumbers,
 String beans. denticulata
 Golden flowered vegetable, Medicago,
 Artichokes, Jerusalem.
 Gourds in variety.
 Cellery.
 Lotus roots,
 Endive.
 Tomatoes.

Fruits & nuts.

Oranges in var.
 Lemons, (American grown)
 Apples in var.
 Pears.
 Persimmons, fresh & fried.
 Grapes.
 Pomeles.
 Pomegranites.
 Bananas.
 Crab-apples.
 Jujubes dried.

Nuts.

Walnuts (Persian)
 Chestnuts,
 Sagitaria (Water nut)
 Trapa natans, (Water nut)

We left Tientsin at 3.50 P. M. and arrived back in Peiping, about 7.20 that night. The trip was a rather enjoyable one and we feel that we picked up a good deal of interesting information to add to that we already have accumulated, especially regarding Abutilon avicennae.

WEDNESDAY JANUARY 7, 1931

Tokyo Japan

Notes made by W.J.Morse.

In the morning we went to the Imperial Department of Agriculture with a letter of introduction from Mr. Sato of the South Manchurian Railway, Dairen, Manchuria, China. To Mr. Yukio, Okada, Agricultural Engineer in the Bureau of Agricultural Products. We were taken to the Office of the Director, Mr. A. Manabe, who gave us much information on soybean cake utilization in Japan and also bulletins and papers containing the latest data on acreage, production, utilization and industries of the soybean in Japan, Chosen and Taiwan. These data are the most complete we have yet received on the soybean in the Japanese Empire.

Mr. Manabe stated that the acreage and production of soybeans is gradually decreasing in Japan proper, over 50,000 Cho in acreage and 1,000,000 koku in production since 1925. This is due mainly to the increased acreage of more intensive farming, especially truck crops and rice. The acreage, however, of soybeans for green manuring purposes is increasing rapidly, especially in the southern half of the main Island and Kyushu Island.

Japan proper produces more than 2,500,000 koku of soybeans yearly but uses over 7,500,000 koku, the difference in production and utilization is imported from Chosen and Manchuria. The beans imported from Manchuria are of much lower quality than beans from Japan proper and Chosen and are used primarily for the manufacture of soy sauce, miso, bean oil and bean cake. The beans from Japan proper and Chosen, are utilized primarily for food, such as bean curd (Tofu), confections, flour and green vegetable beans. The

following table gives the ration in percent of soybeans utilization in Japan.

PRODUCTS.	PER CENT.
Miso.....	22.7
Soy Sauce.....	22.7
Bean oil and bean cake.....	21.6
Bean curd.....	15.4
Green vegetable beans.....	0.8
All other food uses.....	6.0
Feeding purposes.....	6.2
Green manure.....	2.5
For planting.....	1.6
Miscellaneous uses (other than food).....	0.5

THURSDAY JANUARY 8, 1931. PEIPING, CHINA.

Worked on field notes and in getting our December account ready to mail into Washington. After tiffin Liu went over to the City Post Office and got the parcel containing the persimmon plant propagating material sent up from Hang Chow by Mr. Chang Hsien Chow which was collected and forwarded at our request. The parcel contained 25 nice young trees of Diospyros sp. Chinese white-bark persimmon, these were gotten from the mountain side in the wild.

The trees arrived in good condition and in preparing them for repacking to go to Washington we saved the prunings and made them up into scions, some 40 or such a matter. The trees and scions were given our #7700 (On their arrival in Washington they were assigned

Foreign Plant Introduction #91594) We got the trees and scions packed and ready to go into the mail in the morning. We have been trying for a good many years to get propagating material of this white-barked persimmon and are delighted at being successful in getting such a nice lot of material. We hope that it arrives in Washington in good condition and that they will be successful in getting a goodly number of the young trees to grow and also be able to get a nice lot of buds or grafts to take and grow.

Early in December we sent in scions of the white-barked persimmon from the Hang Chow region under numbers 7493 and 7494 and a few seed of this same variety under #7596. We hope that this material reached its destination in good shape and that a goodly quantity of both seed and scions were saved.

THURSDAY JANUARY 8, 1931.

Tokyo, Japan,

Notes by W. J. Morse.

Snowing and rather cold in the morning. We went to the Imperial Department of Agriculture, ~~where we had an appointment~~ Experiment Station, at Nishigahara where we had an appointment with Dr. Terao Chief of the Plant Breeding Department. Dr Terao advised us that the Office and Laboratory building at their Experimental farm burned down last October. All plant breeding records of 15 years work, as well as a great part (except that remaining in the fields) of the seed of the breeding work was destroyed by the fire.

We were especially anxious to talk over with Dr. Terao his chemical work, that is the use of potassium chloride solutions in determining the winter hardiness or cold resistance of plants more

completely than we did last spring. Since our visit early last year Dr. Terao said that not only did they find that they could determine the cold resistance of different varieties of crops but also the drought and disease resistance of the varieties of crops through the toxic or non toxic effects of potassium chlorate solution. These phasis will open a vast field of new experimental work to plant breeders and enable them in a short time, in the laboratory to determine the resistance of plants to cold, disease and drought. As yet the results of his experiments have not been published but are in manuscript form. As they are to be published also in English Dr. Terao asked if I would not go over the manuscripts and correct the English. The results contained in the manuscripts were very interesting and should be of great value. Such plants as rice, wheat, barley, soybeans, millet, and genge clover (*Astragalus sinensis*) were used in the experiments.

FRIDAY JANUARY, 9, 1931.

Notes by
P. H. Dorsett, Peking China.

The day has been windy and bitter cold and the poor riksha boys must have suffered. The strong North wind and air filled with dust added to the discomfort of all who had to be in the open.

We left the hotel Des Wagin Lite at 9 oclock and drove by the Post Office to mail parcel post package 35 F. It contains the 40 scions and 35 trees of the white-barked persimmon 91594. This is the plant propagating material we put up yesterday and which we trust will reach its destination in good condition for it may prove to be of very great value in connection with the development of the Oriental persimmon industry in America.

After dropping the package in the post office we drove out to the persimmon storage yard of Mr. Chi's, at the village of Hsiang Tang, some 25 miles to the North of Peiping where we are getting air persimmon bud temperatures records. We arrived at the storage yard about 10.50 A. M. and at 11 oclock opened the trunk and looked after our records and the changing of the chart and putting a new one in place. The glass stem centigrade thermometer hanging in the trunk recorded a temperature of 4 below 0. As we recall this is the lowest temperature we have had since we started this work Nov. 7, 1930.

When we left the storage yard about 2 P. M. the same centigrade thermometer in the same place registered 14 degrees centigrade below 0; the air was full of dust and a rather strong Northwest wind was blowing and it was disagreeable out.

Today we got 60 persimmons from the bud in which we have

we have two thermometer tubes. This fruit, when received, was hard frozen. We weighed and calipered 10 fruits. These we numbered 51 to 60 inclusive and after getting the data we desired, put the 10 persimmons in a small cotton bag and returned them to the bed from which they were taken. We took the balance of the fruit back with us to the hotel. There we numbered 10 fruits from 51 A to 60 A inclusive and after weighing and calipering them, they were put on a table in the attic room, where there is no fire and the window is kept open. We also placed 10 additional persimmons on the table to use in comparison and placed the balance, 30 fruits on the sill just outside of the window in our office room for use in experiments in defreezing and refreezing.

The day has been really very cold, dusty and disagreeable. Before leaving the storage yard we learned from Mr. Chi/ That persimmons were selling at the yard as follows.

1st.	grade large (Tamopan)	\$8.70 Mex per 1,000	
2nd	" " "	7.00 " " 1,000	
3rd	" large & lantern	6.40 " " 1,000	The lantern

is a small fruited variety which sells normally for considerable less than the 1st. grade large or Tamopan persimmons.

The chart we took off today, looks to be about perfect and is not only a nice looking chart but we consider it a real prize. Its chart #9 and we hope to get more like it. We neglected to note under fruit quotations for this date that prior to this the persimmons were sold as one grade and were bringing \$8.70 Mex per 1,000. The lateness of the season and abundance of fruit apparently caused the grading of the fruit and change in prices.

Started experiments in air and water defrosting today. The results of this work will appear under the date on which they are concluded, which perhaps will be two or three days hence. As we do not have any artificial means of freezing the fruit and have to rely upon the fruit freezing naturally on the window sill out side of the window of our office room, which by the way is to the West, there is no way of our estimating how long these experiments will run. This depends entirely upon the weather conditions.

TOKYO, JAPAN . Notes by
W. J. Morse.

Most of the day was spent in the Shinjuku district looking up soybean products. More String Matto in rice straw packages was observed in this section than any we have visited.

At the stores we found considerable quantities of fish preserved in white miso and also fish preserved in saki mash. The latter is said to keep much longer than the miso preserved fish and if it keeps long enough might afford a good article of export to the United States, for undoubtedly it would prove far less harmful than some of the products now used in violation of the 18th., amendment. However, I do not know just how much "kick" their saki mash cured fish has stored away in it.

Nearly all food stores carried a variety of vegetables preserved in red miso. Although we found many soybean confections, none were new.

Peking China, Jan. 10, 1931
notes by
P. H. Dorsett.

We put in the best part of the day with our experiments in the defreezing and refreezing of persimmons. We took a few of the commercial persimmons, which were in good shape, and also a few of those which blackened and went bad in storage beds in one of the storage yards at Hsiang Tang, which were frozen on the trees before being picked, to try and get autochrome pictures, for the purpose of bringing out the difference in color. We are doubtful however, of getting satisfactory results, but thought it worthy of a trial.

It was somewhat warmer during the day than it was yesterday but is still cold enough to be uncomfortable, even in our rooms at the hotel, which by the way have a northwestern exposure.

TOKYO, JAPAN. Notes by
MR. W. J. Morse.

During the day we visited the Hongo district looking up soybean products, especially miso meat preserving places. Only one such place was found and this was using the Kobe method of beef and white miso. The meat was preserved, both in small tubs and boxes. Very few places were found where fish was preserved in miso. All fish we observed was preserved in saki mash.

Numerous confectionary stores were visited but no new confections, from soybeans were found. It was observed that more soybean sweet flour pastry confections are in the stores than were found last season.

XXXXXX

Peiping, China,
January 10, 1931.

Mr. J. L. Mahoney,
Principal Clerk,
Foreign Plant Introduction,
Bureau of Plant Industry,
U. S. Department of Agriculture,
Washington, D. C.

Dear Joe:

I am sending you herewith my completed account for the month of December which I trust you will find in shape to pass on to the Accounting Office.

I have several official letters of yours requiring attention but am so completely swamped with work at this time that I am not in a position to reply to them today.

Yesterday Ruth and I went out to Hsiang Tang to change the temperature chart on our thermometer which we have installed in an open air persimmon storage bed in that village. We secured for the first time what looks to us to be a perfect chart showing two temperatures for the persimmon bed, one near the top and one near the bottom, and an air temperature record. If we can continue to get charts like this for the rest of the season we will have something nice to present to the Office upon our return. When we reached the storage yard at eleven o'clock yesterday, the temperature (air) was 4° C. below zero. By about half past one, when we had completed weighing and calipering 50 persimmons, and were ready to return home, the temperature had dropped to 14° below zero C., and believe me it was cold.

We worked until after ten o'clock last night and are at it again today trying to get notes and data concerning air and water defrosting and re-freezing of defrosted persimmons.

We plan to leave Shanghai aboard the President Pierce scheduled to sail from there on March 27th. We will leave Peiping perhaps about March 15th. If you will be kind enough to do so, I suggest that you take up the free entry of the port at the port of San Francisco for us for the arrival of the President Pierce April 21.

I also suggest that you arrange to hold my salary checks and reimbursement checks at Washington after February 10th, as we would likely be on the road home before they could reach us. I have already written you in some detail regarding our return trip, and hope to hear from you concerning these matters before time for our departure from Peiping.

With kindest regards and best wishes to all, I remain

Sincerely,

F. H. Dorsett,
Agricultural Explorer,
Dorsett & Morse Agricultural Expedition.

PHD/rd.
Incls.

PEKING, CHINLI CHINA. January 11, 1931.

Notes by

P. H. Dorsett

Worked again today with our experiments incident to the defrosting and refreezing of persimmons. This we find is more or less difficult without artificial equipment, however, we believe that the data we get will prove to be of interest and may have some bearing on work at home under more favorable conditions.

With the several experiments we now have running and more that we would like to add we find that we really need printed forms for the tabulation of our results. We are of the opinion that tabulated forms would not only result in facilitating the work but would also make our results more uniform. We are preparing tabulated forms for our records in the experiments of defrosting and refreezing persimmons and hope to have these for any future work that we may undertake in this connection. In case we get the printed forms before this experiment is concluded we will transfer our records to the printed forms.

It is somewhat warmer today than it was yesterday and as a result the persimmons in the window, even though we are shading them, are not so hard frozen as they were yesterday.

PEIPING, CHINLI CHINA. JAN. 12, 1931.

Notes by P. H. Dorsett.

Monday.

It was clear and fairly cold in the morning, but not as cold by quite a little as it was on Friday the 9th., when we put the persimmons in the window and began our experiments of defreezing and refreezing. The maximum temperature for the night, just outside where we have a supply of persimmons stored was $\pm 24^{\circ}$ F and the minimum for

the same period was 4 8 P. We continued our notes and observations on the defrosting and refreezing of persimmons. The fruits used and under ~~experimental~~ observation are the same as the ones we started with on the evening of January 9th., 1931. The persimmons have, including today's work been defrosted 3 times and refrosted 2 times.

Today we sent our tabulated form to the printer and hope, within a few days to have printed forms to work with. We made a trip to Hartungs Photo Shop and got the autochrome pictures we requested then to make of the two kinds of persimmons which we took up to them a few days ago and are sorry to have to record that they are not at all satisfactory. Thus far we have not been able to get any reproductions of persimmons in colors which are at all satisfactory and have about given up hopes accomplishing this desired result.

KOBE, JAPAN. MONDAY JAN. 12, 1931
Notes by Mr. J. W. Morse.

Left on the 9.25 express last night from Tokyo and arrived in Kyoto at 7.25 this morning. We had planned to visit the Imperial Agricultural College this morning but learned by phone that Prof. Namikawa was not in so we left for Kobe to visit the Department of Agriculture of that prefecture.

We met the Director of the Bureau of Agricultural Products, to whom we had a letter of introduction from Mr. Sato of the South Manchurian Railway, at Dairen, Manchuria. We were told that in the Kobe prefecture 11,719,550 kans of Manchurian oil cakes are imported yearly and of this amount 5,084,204 kans are used for feeding to cattle, hogs and poultry. One hundred and fifty beef cattle are killed

yearly in the Kobe district, about one hundred thousand hogs are killed yearly in the same district.

Although soybean oil cake is fed to both cattle and hogs the farmers hesitate to feed too much as it is said to produce yellow fat which is not preferred by butchers. The market demands a white fat, such as that produced by feeding rice bran and wheat bran. The cattle used for beef are cows and oxen used by the farmers for farm labor for four or five years. After this period the cattle are put through a fattening period of about 100 days, being fed the bran of wheat and rice mixed with soybean oil cake. Excellent results have been had in using soybean oil cake for dairy cattle and poultry.

During the past five years several small oil mills in Kobe have been crushing Manchurian soy-beans for oil and oil meal. At the present time none of the mills are crushing beans. One of the assistants of the Bureau accompanied us to a large miso meat preserving place. This establishment is a wholesale meat house and in addition packs 5,000 to 6,000 tubs of miso preserved meat yearly.

The proprietor advised that there is a very large number of miso meat preserving places throughout KOBÉ the Kobe district and that about 3,000,000 tubs are sold yearly. The small tube costing 70 sen each, hold about 2 pounds of beef. The meat will keep in cool weather about one month but the meat is cured at its best in about two weeks. It can be used in from 7 to 10 days. The proprietor had one of his men pack a small tub so that we could see the method and take pictures. Afterwards he gave us the tub and meat that we might try it.

The Kobe district is noted for its fine quality of beef. In previous years beef was obtained from Canada but was of rather poor quality. Some beef of good quality is imported from Tsingtao China.

We called at the American Consulate to see if we could get in touch with Mr. Fred Taylor, who was recently sent to Japan to study the uses of cotton. The Consul advised that Mr. Taylor was out and doubted if we could be of much help to him in his work. Mr. Taylor plans to study the uses of cotton also the cotton mills, and the Consul thinks that he will have a rather difficult time as it has been his experience industries are rather reluctant to divulge their business methods.

PEIPING CHIHLI, CHINA
Tuesday Jan. 13, 1931.
Notes by P. H. Dorsett.

This morning it is considerably warmer, the maximum between 8.20 P. M. last night and 8.20 A. M. this morning was 43 F and the minimum for the same period was 20 F. as a result the fruit defrosted yesterday and put out on the window sill was only very slightly frosted this morning. After looking the situation over it was decided that nothing was to be gained by trying to continue the experiments today. As a result we let the fruit lay undisturbed and in case they are frozen in the morning we will continue the experiments and observations.

The maximum temperature reading for the day, between 8.20 AM and 8.20 P. M. was 40 F and the minimum for the same period was 24 F. It now appears that tomorrow will be warmer than today and if this proves to be true all the fruit we have in the window

will be air defrosted. Regardless of the conditions during the night we will make, tomorrow, such notes as we feel may be of value and interest. Today we have worked on our field tri reports and on the pictures for our albums. These we hope to have in shape by some time next week so that we can have the Hartung Photo Shop mount & K&M get them mounted into albums. They will then be safe even though we do not get them written up.

Kyoto
TOKYO, JAPAN Tuesday Jan. 13, 1931
Notes by MR. W. J. Morse.

In the morning we went to the Imperial Agricultural College where we met Prof. Hanikawa, who stated he was awaiting us yesterday. He did not quite understand why we were given wrong information, concerning him, at the college yesterday morning.

We were taken to the Chemical Laboratory where Dr. Katagiri is doing some work in soybean products, especially soy sauce. Concentrated soy sauce is shipped to the United States in rather large amounts and then diluted and bottled. We were shown a sample of soyamint which is a practical soysauce product and made in about three months. It is said that the soybeans are treated with an acid solution, then neutralized and rice Koji added. After three months of curing, the soy sauce is ready for use. After lunch we went to the Taitokuji Temple where the famous Taitokuji Matto is said to have been originated by one of the Temple priests more than 400 years ago.

Mr. Sakkei Ota one of the temple priests very kindly explained the history of the dried form of Natto as well as the

whole process its manufacture. This form of Natto will keep indefinitely and is eaten when sprinkled with a mustard sauce or sweet liquor. The Hamamatsu Natto is made in the same manner but is allowed to dry much more.

We also visited a large miso factory, where both red and white miso is made. White miso is manufactured quite extensively in the Kyto and Kobe districts. The white miso keeps only about one month in the summer and about three months in the winter. The most famous forms of miso made in Japan, are as follows.

Sendai miso.....red.

Kwanto miso.....red.

Osaka miso.....black.

Country miso.....red.

Kinsanji.miso.....red.

White miso.....white.



#46444- Soja max soybean miso
meat preserving, Kobe, Japan, Jan 12
1931. A small flat tub filled with
slices of meat in miso. This practice
is most common in the Kobe region.
Price for a two pound tub 2 Yen.

TUESDAY JAN, 13, 1931

#46445-Soja max, soybean miso preserved meat., Kobe Japan, Jan. 12, 1931. A nearby view of a small tub containing meat preserved in miso. Meat preserved in this way is always broiled.

Such a package contains about 2 pounds of beef and sells at retail for 2 Yen, including tub and contents.



#46446- Soja max, soybean Natto. Kyoto Japan, Jan. 13, 1931
Group at the Kyoto Imperial College of Agriculture; Prof. Matsumoto, Prof. Hamikawa, W. J. Morse, U. S. Department of Agriculture, Washington, D. C. and Mr. Seldmi Ota, Priest of the Taitokuji Temple at Mr. Morse's right, who explained the method of manufacture of Taitokuji Natto. A dried form of Natto originated at the Temple more than 400 years ago.

On the 11th., we decided to try one of the frozen persimmons, brought in on the 8th., hard frozen from the storage yard at Haining. Sang to try and get information as to whether it was astringent or non astringent.

So, at 3.30 P. M. brought in one of the frozen fruits and let it defroze. at 11.30 when the fruit was brought in the outside temperature was ± 20 F. Room temperature ± 20 C. Cut out $\frac{1}{2}$ while frozen it was quite astringent. ~~At 2.05 P.M. the fruit was defrosted but still quite astringent.~~

~~The fruit was brought in at room temperature of 20°C frozen~~

Time.	amt.	R	tem.	degree.	Astringent..
P.M.				of	100.000000
				fruit.	
2.05	$\frac{1}{2}$	20	C	± 2	"
2.20	"	"	"	"	"
2.30	"	"	"	± 10	"
2.50	"	"	"	± 10	"
3.05	"	20	"	d. f.	"
3.10	$\frac{1}{2}$	"	"	d. f.	"
10.00	"	"	"	$\pm$ frozen	"

The fruit was $\frac{1}{2}$ to $\frac{1}{4}$ defrosted.
Put outside temp. ± 20 F
 ± 10 F

January 12, fruit on window sill frozen last the night Max. outside was ± 20 Min. ± 8 F.

2.50	"	22	"	h frozen	"
3.15	"	"	"	softening	"
3.30	"	"	"	± 2	"
3.45	"	"	"	± 2	"
4.00	"	20	"	± 2	"
4.15	"	"	"	Practically d f	"
4.30	"	"	"	soft through and still a little astringent.	"
7.00	$\frac{1}{2}$	"	"	Put out on window sill, but on account of rise in temperature do not expect it to freeze tonight.	"

January 13, 1931.

9.30 A.M. $\frac{1}{2}$ fruit on window sill, while cold is still quite soft Maximum for the outside during the night ± 42 F. Min. ± 28 The $\frac{1}{2}$ persimmon is still slightly astringent. Conditions do not justify our trying to carry this experiment further at this time.

XXXXXX

Peiping, China,
January 13, 1931.

Mr. J. L. Mahoney,
Principal Clerk,
Foreign Plant Introduction,
Bureau of Plant Industry,
U. S. Department of Agriculture,
Washington, D. C.

Dear Joe:

This is in reply to your kind favor of December 5th which reached us a month later to the day. Thanks for the copies of the Official Record.

1930, it would appear, was a record year for foreign plant introduction explorations, and I trust that all of them have accomplished something worth while not only for the Office of Foreign Plant Introduction but also for the country.

Sister sent me a clipping from one of the Washington papers telling of Doctor Fairchild receiving the George Robert White Medal of honor for his agricultural achievements. If I remember correctly, this Medal was awarded, several years ago, to Dr. Van Fleet for his work with roses. I am sure that Doctor Fairchild appreciates this honor and I am delighted to know that his many years of hard work have been so handsomely rewarded.

It would appear from the clippings that we receive from Washington, and the information received in your letter and others, that the unemployment situation in the United States is extremely serious, and one cannot help but wonder what the outcome will be before there is a change for the better.

Quite probably we will have to employ a guide when we first get back to Washington in order to get around and find our friends.

This morning we went to see the American Express relative to reservations for our return trip home. We gave them as our date of leaving Shanghai, March 27th on the S. S. President Pierce. This is in accordance with advice given you and others in previous letters. We find, however,

Mr. J. L. M.

-2-

1-13-31.

that our date of arriving in San Francisco given you as April 21st is incorrect and that we are due there on April 15th. I do not see that this will necessitate any change in our plans either here or after arriving in San Francisco. Please do not over look the arrangement of holding our salary and reimbursement checks at Washington after February 10th.

We plan to leave here on the 15th of March. We want a few days in Shanghai and also a few days to run over to Hang Chow.

The weather has moderated materially since last Friday, in fact so much so that today we have to discontinue our work temporarily on the defreezing and refreezing of persimmons. We are using the window sill outside our office room not only as a cold storage place but also for refreezing the fruit, and the temperature last night was not low enough to entirely freeze the fruit put out yesterday. However, we have some very interesting data on both water and air defrosting of persimmons. We will have a lot to talk over with you and other members of the office when we return.

We have not had any word from Morse for quite a while and do not know definitely whether he is still working in Dairen or has gone to Japan to complete some of his work there, and have no word whatever as to the date when he expects to sail for the States. I am expecting a letter from him at any time, however.

With kindest personal regards and best wishes to you and all the members of the force from all at this end of the line, we remain as ever

Sincerely yours,

P. H. Dorsett,
Agricultural Explorer,

PHD/rd.

Dorsett & Morse Agricultural Expedition.

Washington, D. C.,
December 5, 1930.

Mr. P. H. Dorsett,
American Legation,
Peiping, China.

Dear Mr. Dorsett:

I am sending you enclosed a couple copies of the Official Record, as no doubt they will provide interesting reading, for they contain much news relative to the Department.

Mr. J. G. Dickson, Madison, Wisconsin, Office of Cereal and Disease Investigations, returned on November 12th from a trip through western Europe, Russia and the northern portion of Asia Minor, where he conducted studies on wheat, corn, rye, etc. While the funds for his trip were not furnished by this office we handled many of the arrangements relative to the trip and really look upon this as one of our explorations.

You will be interested to know that Dr. Fairchild received the George Robert White Medal of honor (Gold) about two weeks ago, issued by the Mass. Horticultural Society for his contributions to horticulture. Dr. Fairchild seemed very well pleased with this award. He left for Florida on November 25th. Dr. Galloway left for Lakeland, Florida on November 29th. Dr. Donald Reddick who is conducting potato work in Mexico is expected back to Washington about the 9th or 10th of December. Max Souviron will perhaps continue his work during the months of January and February, during which time he will also be carrying on investigational work for the Office of Fiber Investigations through Peru.

The unemployment situation in this country is very acute and when Congress convened on December 1st, the President asked for an appropriation of \$100,000,000 to 150,000,000 to be used in public work for the benefit of the unemployed. If Congress passes this legislation, it is very probable that we will get a few "shokels" to be used at the Bell Station, as well as Chapman Field.

Within the past two or three weeks we have had a touch of cold weather for Washington, the thermometer getting around 13 degrees. At the present time, however, we are back to normal weather and it is not too cold nor too hot.

When you get back to Washington you will not recognize the section around 14th and B. Sts., S. W. As I have already advised you the East and West wings have been connected making a very fine building. The South side of B Street is pretty well dug up at the present time and in the near future another agricultural building will be in the making. As I understand it the whole South side of B Street, from 12th to 14th, will be occupied by agriculture. This is the side on which the McLachlen Bank was located. They have moved out of their quarters and have a new branch building on 14th Street, about opposite the Bureau of Printing and Engraving.

Trusting that this finds you and Ruth enjoying the best of health and with best wishes to all for a very happy Xmas and New Year, I am

Sincerely yours,

(s) J. L. Mahoney,
Principal Clerk.

JLM/aab

Enclosure.

P. H. Dorsett's Notes,
Wednesday, January 14, 1931,
Peiping, Chihli, China.

Today we worked with our pictures and with our Ch'ing Ma product collection. We plan to write a special report dealing with this interesting subject.

W. J. Morse's Notes,
Wednesday, January 14, 1931.
Himeji and Tatsuno, Japan.

Left Kyoto at 8:33 A.M. for Himeji and went at once to the Hyogo Animal Industry Experiment Station where we had a letter of introduction from Mr. Sato of the S.M.Ry, Dairen, to Prof. Makino, the director. We found that Prof. Makino was ill in bed with influenza. His assistant, Mr. Onuma, took us in charge and explained the feeding experiments with soybean products.

The station was established in 1921 and conducts breeding and feeding experiments with dairy and beef cattle and hogs. Soy sauce mash (after the sauce has been pressed out), bean curd mash and soybean oil cake have been used in mixed feeds for cattle, hogs and poultry since the founding of the station. The South Manchurian Ry, through Mr. Sato's visit last fall, arranged cooperative experimental work in which larger amounts of soybean oil cake are used. Mr. Onuma kindly gave us the standard feed formulas used at the station for dairy and beef cattle, hogs and poultry. In all of these soybean oil cake has an important place.

In this section farmers formerly used whole soybeans for cattle and hog feed but now soybean oil cake is wholly used as it is much cheaper. However, about 80% of the

soybean oil cake imported in the district is used for fertilizing purposes in the rice paddies. The farmers use soybean mash and soybean sauce mash. As there is a section (Tatsuno) nearby where soy sauce is extensively manufactured there is an abundance of mash which sells at present for 3 sen per kan. When used for feed much of the salt is removed by soaking the mash which is fed only to hogs and cattle. As roughage, genge (*Astragalus sinensis*) is used as silage.

Mr. Onuma thought we should visit the Tatsuno soy section as the factories make a lightcolored sauce quite different from the sauce made in other parts of Japan. He gave us a card of introduction to Mr. Yokoyama, the secretary of the Tatsuno Soy Sauce Manufacturers' Association. This Association consists of sixty factories in the Tatsuno region, all making the light colored sauce. These factories use about 200,00 koku (1,000,000 bushels) of soybeans yearly. Light colored soy sauce is said to have a higher flavor and does not color the food in cooking. It is used most extensively in the Kyoto and Kobe districts and along the shores of the Inland Sea.

We were taken to one of the largest soy sauce factories (Asahi Shoyu Corp.) by Mr. Shizu Tada, chemist of the Association. The manager of the factory took us through the entire plant which covered a very large acreage. The factory has adopted the latest methods and machinery and at present is enlarging the plant.

XXXXXX

Peiping, China,
January 14, 1931.

Mr. Knowles A. Ryerson,
Principal Horticulturist in Charge,
Foreign Plant Introduction,
Bureau of Plant Industry,
U. S. Department of Agriculture,
Washington, D. C.

Dear Mr. Ryerson:

Your letter of December 4th, 1930, was received on January 5th. Today I am mailing a letter to Mr. Taylor c/o American Consulate at Kobe, Japan. I am giving him the addresses of two gentlemen in Japan proper and two in Peiren, Manchuria, who may be in a position to be of service to him in connection with his investigations of cotton consumption. For your information, I am inclosing a copy of my letter to Mr. Taylor.

On the morning of January 9th, we forwarded to you, by commercial parcel post, package #35-P. This shipment contained twenty-five small trees of the white barked persimmon, also twenty scions made from the trimmings of these trees when they were packed. Both the trees and the scions went forward to you under our #7700. They were secured through correspondence from a gentleman at Ku Tang near Hang Chow, where Mr. Liu secured scions and seed of this persimmon while there the end of November. The material Mr. Liu secured while at Ku Tang went forward to you under our numbers 7493, 7494 and 7596.

If the trees and scions shipped on the 9th reach Washington in good condition, which we trust will be the case, they should be sufficient to give us a nice lot of material for experimental work. I would like to suggest here that in the office the scions and the trees be given separate S. P. I. numbers, otherwise there may be difficulty later on in determining which of the shipment came in as scions and which came in as trees.

Yesterday we saw the American Express people relative to reservations for our return trip to America. Unless something comes up which we do not expect, we plan to leave Peiping about the 15th of March. We will spend a few days in Hang Chow and also a few days in Shanghai, and will sail from there on the S. S. President Pierce on March 27th.

Mr. E. A. R.

-2-

1-14-31.

She is due to arrive in San Francisco on April 15th.

I have already written to Joe and asked him to take up with the State Department the matter of the free entry of the port of San Francisco for us. I presume there will be no difficulty in arranging this. In case it is important for you to write me later than February 10th, I suggest that you address your letter to me in care of the American Consul General at Shanghai and mark the same "Hold".

Our work is progressing quite satisfactorily and we are getting some interesting data concerning the persimmon industry in Peiping and vicinity.

With kindest personal regards and best wishes, I remain

Very truly yours,

P. H. Dorsett,
Agricultural Explorer.
Incl. Dorsett & Morse Agricultural Expedition.

PHD/rd.

Incl.

Washington, D. C.,
December 4, 1930.

Messrs. P. H. Dorsett and W. J. Morse,
Care American Consul,
Peiping, China.

Dear Dorsett and Morse:

Among the new men appointed for the Foreign Service of the Bureau of Agricultural Economics is Mr. Fred Taylor, who used to be in cotton work in the Department, and later went with Firestone. He has now been appointed Special Investigator in the Bureau of Agricultural Economics to study cotton consumption in the Orient, primarily in Japan, and to look into competition with and demand for American cotton. He has asked that you folks send him letters of introduction and the names of men in Japan and other places in the Orient who would be of assistance to him in his studies. He has requested that you send them in care of the American Consul at Kobe. He leaves shortly and would like very much to see you before you return. You might give him your itinerary and indicate where he might tie in with you. He would appreciate this very much. We want to help these Agricultural Commissioners in every way possible. They have been helping us in our other work and through mutual cooperation we can do a great deal for each other.

With best wishes

Very sincerely,

(s) Knowles A. Ryerson,
Principal Horticulturist in Charge.

KAR-N.

copy sent Care American Consul,
Dairen, Manchuria, China.

XXXXXX

Peiping, China,
January 14, 1932.

Mr. Fred Taylor,
c/o American Consulate,
Kobe, Japan.

Dear Sir:

In a recent letter from Mr. Knowles A. Ryerson, In Charge of the Office of Foreign Plant Introduction, Washington, D. C., he advised that you were soon proceeding to the Orient for the purpose of investigating the consumption of cotton, primarily in Japan.

In compliance with Mr. Ryerson's request, I am inclosing herewith four cards addressed to Messrs. Y. Sato and Kan Matsushima, Bureau of Agriculture, South Manchurian Railway, Dairen, Manchuria; Professor Inazo Hasekawa, Horticultural Institute, Department of Agriculture, Kyoto Imperial University, Kyoto, Japan; and Mr. T. Sakata of the T. Sakata & Company seed firm at Nishi-Hiratsuka, Yokohama, Japan.

I do not know that any of these gentlemen are especially interested in cotton. They all speak English quite fluently and quite probably are in a position to give you considerable information on the subject in which you are especially interested. They may also be in a position to put you in touch with cotton experts in Japan who can aid you in your investigations.

Perhaps Mr. Sakata, who is an influential business man in Yokohama and who has visited the States on several occasions, may be best able to put you in touch with commercial men and organizations who can help you.

I plan to leave Shanghai on the S. S. President Pierce scheduled to sail on March 27th from that port, and due to arrive in Kobe on the 29th. I will be pleased to have the pleasure of meeting you at that time if convenient.

Wishing you every possible success, I remain

Very truly yours,

A. H. Dorsett,

Agricultural Explorer.

Dorsett & Morse Agricultural Expedition.

END/rd.
Incls.

Records of Defrosting and Refreezing Tamopan Persimmons.

6961

Experiments conducted in our office at the Grand Hotel des Wagons-Lits, Peiping, Chihli, China, 1931.

Hard frozen fruit was brought in from the storage bed at the village of Hsiang Tang, some 25 miles north of Peiping and put on window sill outside of our office, 1931.

For details relative to defrosting and refreezing see other side.

WEIGHTS AND MEASUREMENTS

Date & Time	Fruit No.	Weight in Grams	Thick- ness	Short diam- eter	Long diam- eter	Short diagonal diameter	Long diagonal diameter
-------------------	--------------	-----------------------	----------------	------------------------	-----------------------	-------------------------------	------------------------------

This is the tabulated record for experiments in the defrosting and refreezing of persimmons to which reference was made in our notes of a few days back. I am beginning to fear, however, that the weather conditions are going to be such that we may not be able to use them this season.

An artificial freezing outfit would surely come in handy just now.

1931.

Date & Time of Observa- tions.	Tempera- ture		Interior Fruit Temp.		Astr- ingent, Little, Much, Non.	Frozen hard, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{1}{4}$, hard, Considerably, Little, Defrosted.
	Out- side	In side	in Air	in Water		
10.10 A. M.	Fruit placed in water					
10.15	Temperature of water ± 10 C					
"		fruit - 7 C				
10.30		- 4 C	Fruit about $\frac{1}{2}$ defrosted.			
"				± 8 C		
10.45		- 3 C		± 8 C	Fruit from $\frac{1}{4}$ to $\frac{1}{2}$ defrosted.	
11.00		- 1 C		± 8 C	Room temperature 20 C above 0 $\frac{1}{2}$ to $\frac{2}{3}$ defrosted.	
11.15	Room T ± 20 C	- 1		± 8 C	Fruit almost defrosted.	
11.30	"	0		"	Fruit weighed and calipered and at	
1.05	put aside to drain before putting outside.					
1.10	Temperature of interior of fruit 0 C					
1.15	"		"	± 10 C	The fruit is all	
considerably darker than when defrosted on the 10th. At 1.15						
fruit put on window sill outside of the window. Outside						
temperature 26 F above 0. At 10.00 P. M. the temperature						
outside was 19 F above 0. At this time the fruit was quite						
soft.						

Peiping, Chihli, China, **JANUARY, 12, 13 and 14, 1931.**

[illegible]

Data Concerning Defrosting and Refreezing Tamopan Persimmons.

Peiping, Chihli, China,

JANUARY 10 and 11, 1931.

Date & Time of Observations.	Temperature		Interior Fruit Temp.		Astr- ingent, Little, Much, Non.	Frozen hard, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{1}{4}$, hard, Considerably, Little, Defrosted.
	Out- side	In side	in Air	in Water		
5.45 P. M.			-10 C			
6.00			-10 C			
6.15			- 8 C			
6.30			-7 C		Fruit still quite hard frozen	
6.45			- 7 C		Fruit softening a little.	
7.00		+ 13 C	- 6 C		Fruit a little softer but no color change in/	
7.30			- 5 C			
8.50		+ 16 C	- 5 C			
9.00		+ 21 C	- 3 C		Fruit not quite defrosted.	
10.00		+ 21	- 3 C		Fruit very cold but practically defrosted	
					Fruit weighed and calipered and put outside, see other side	
9.45 A M					JANUARY 11, 1931, Max. night temperature + 24 F, Min. + 8 F	
					outside temperature when fruit was brought in + 16 F	
10.05 A M		Room + 16 C	Air T. - 10 C		All three fruits froze hard last night.	
10.20		+ 19 C	- 8 C			
10.35		+ 20 C	- 7			
10.45		"	- 6		Fruit softening a little.	
11.00		"	- 6		Fruit considerably softer.	
11.15		"	- 5		" about $\frac{1}{2}$ defrosted.	
11.30		"	- 4		" $\frac{1}{2}$ to $\frac{1}{3}$ "	
11.45		"	- 4		" $\frac{1}{3}$ to $\frac{3}{4}$ "	
12.00		"	- 4		" " "	
12.15		"	- 4		" fully $\frac{3}{4}$ defrosted.	
12.30		"	- 4		" " " or a little more.	
12.45		"	- 3		" almost defrosted	

Continued.

Records of Defrosting and Refreezing Tamopan Persimmons.

Experiments conducted in our office at the Grand Hotel des Wagons-Lits, Peiping, Chihli, China, 1931.

Hard frozen fruit was brought in from the storage bed at the village of Hsiang Tang, some 25 miles north of Peiping and put on window sill outside of our office, **JANUARY 9,** 1931.

For details relative to defrosting and refreezing see other side.

AIR DEFROSTED		WEIGHTS AND MEASUREMENTS						and 14.
PERSIMMONS, #'s., 4, 5, and 6.		JANUARY 12 and 13, 1931						
Date & Time	Fruit No.	Weight in Grams	Thick-ness	Short diam-eter	Long diam-eter	Short diagonal diameter	Long diagonal diameter	
9.40 A M		Fruit when brought in was frozen quite hard but not so hard as when brought in from the storage bed on the 9th.						
	4	244	2 2/16"	3 3/16"	3 5/16"	3 6/16"	3 7/16"	
	5b	254	2 2/16	3 4/16	3 6/16	3 6/16	3 7/16	
	6	230	2 1/16	3 1/16	3 5/16	3 5/16	3 6/16	
1.45 P M		Fruit soft through, in fact too soft to caliper.						
	4	243						
	5	253						
	6	230						
JANUARY 13, 1931.								
9.00 A M		The outside maximum last night was $\pm$ 32 F, Minimum $\pm$ 20 F						
		Do not consider fruit sufficiently hard frozen to justify						
		defrosting today.						
JANUARY 14, 1931								
9.50 A M	4	235						
	5	249						
	6	226	Maximum for the night $\pm$ 42, Minimum $\pm$ 28 F.					
		Fruit soft through, In general their color is fair. Tried fruit # 2, Color of flesh fair, very sweet, juicy, carpels somewhat tough, quality of fruit fair, and non astringent. Other fruits returned to their place on the sill outside of the window to freeze if they will before they spoil.						

Data Concerning Defrosting and Refreezing Tamopan Persimmons.

Peiping, Chihli, China, JANUARY 10 and 11, 1931.

Date & Time of Observations.	Temperature		Interior Fruit Temp.		Astr- ingent, Little, Much, Non.	Frozen hard, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{1}{4}$, hard, Considerably, Little, Defrosted.
	Out- side	In side	in Air	in Water		
	Records of the first defrosting, of fruits 7, 8, and 9.					
	The thermometer was inserted in fruit # 8.					
10.15 A. M.		Room + 16 C	- 10 C	Fruit hard frozen.		
10.30		+ 17 C	- 9 C	"	"	"
10.45		"	- 8 C	"	"	"
11.00		"	- 7	" begining to soften a little		
11.15		"	- 6	"	"	"
11.30		18	- 6	" about $\frac{1}{4}$ defrosted		
11.45		17	- 6	"	"	"
Noon 12.00		"	- 5	" from $\frac{1}{4}$ to $\frac{1}{2}$ defrosted.		
pl. 12.15 M.		18	- 5	" about $\frac{1}{2}$ defrosted.		
12.30		"	4 4 $\frac{1}{2}$	"	"	" (or a little more)
12.45		"	- 4	"	" $\frac{3}{4}$	or a little more defrosted
1.00		"	- 4	" about defrosted.		
1.15		"	- 4	"	"	"
1.30		"	- 3	" practically defrosted.		
1.45		"	- 3	" defrosted and soft throught		
		Fruit weighed and put on sill outside of the window.				
		JANUARY 11th., 1931 brought in about 1.30 and weighed				
		and calipered and then defrosted for the 2nd., time.				
1.40 P. M.	+ 26 F	$\frac{1}{2}$ 20 C	- 9 C	Fruit quite hard frozen, but not so hard/ as on Friday 9th.		
2.00		"	- 8 C	" softening just a little.		
2.15		"	- 7 C	" about $\frac{1}{4}$ defrosted.		
2.30		"	- 6	" $\frac{1}{2}$ to $\frac{1}{2}$ defrosted.		
2.45		"	- 6 C	"	"	"

Peiping, Chihli, China, **JANUARY 10 and 11**, 1931.

[illegible]

Data Concerning Defrosting and Refreezing Tamopan Persimmons.

Peiping, Chihli, China, JAN. 12, 13 & 14, 1931.

Date & Time of Observa- tions.	Tempera- ture		Interior Fruit Temp.		Astr- ingent, Little, Much, Non.	Frozen hard, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{1}{4}$, hard, Considerably, Little, Defrosted.
	Out- side	In side	in Air	in Water		
1.50 P M	$\frac{1}{2}$ 28 F	Room $\frac{1}{2}$ 20 C	- 7 C			Fruit frozen fairly hard.
2.15		21 C	- 6 C		"	softening a little.
2.30		21 C	- 6 C		"	"
2.45		20 C	- 5 $\frac{1}{2}$ C		"	perhaps about $\frac{1}{2}$ defrosted.
3.00		21 C	- 5 C		"	$\frac{1}{2}$ "
3.15		22 C	- 5 C		"	$\frac{1}{2}$ to $\frac{1}{2}$ defrosted.
3.15		22 C	- 5 C		"	$\frac{1}{2}$ to $\frac{1}{2}$ "
3.45		22 C	- 4 C		"	"
4.00		22 C	- 4 C		"	almost defrosted.
4.15		22 C	- 4 C		"	Practically defrosted.
4.30		22 C	- 4 C		"	Soft throughout.
4.40		22 C	- 3 C		"	defrosted, Weighed but not calipered
						and put on sill outside of the window. Maximum temperature
						last night $\pm$ 32 F. and minimum $\pm$ 20 F. outside. When fruit was put out
						put out at about 4.50 in the evening the outside temperature
						was $\pm$ 24 F.
						JANUARY 13, 1931.
9.00 A M						Do not consider that the fruit is sufficiently frozen this
						morning to defrost.
						JANUARY, 14, 1931.
10.00 A M						The fruit is in bad shape this morning. We were able to weigh
						#7., 8 and 9 this morning but are unable to get a correct
						weighing of #8 The fruit has darkened in color and looks rather bad
						Flesh poor color, juicy, very sweet but rather poor quality.
						Carbels quite quite tough. There is very little if any astringency.

Data Concerning Defrosting and Refreezing Tamopan Persimmons.

Peiping, Chihli, China,

1931.

[illegible]

Records of Defrosting and Refreezing Tamopan Persimmons.

6987

Experiments conducted in our office at the Grand Hotel des Wagons-Lits, Peiping, Chihli, China, 1931.

Hard frozen fruit was brought in from the storage bed at the village of Hsiang Tang, some 25 miles north of Peiping and put on window sill outside of our office, **JANUARY 9, 1931.**

For details relative to defrosting and refreezing see other side.

WATER DEFROSTED		WEIGHTS AND MEASUREMENTS					
PERSIMMONS, #s., 13, 14, and 15.		JANUARY 12, 13, & 14, 31					
Date & Time	Fruit No.	Weight in Grams	Thick-ness	Short diam-eter	Long diam-eter	Short diagonal diameter	Long diagonal diameter
Maximum temperature, outside last night was ± 32 and the min. ± 14 XXXX							
Fruit brought in about 11 and weighed and calipered. Froze quite hard but not as hard as on th 12th and considerably less hard than 10th.							
11.30 A M	13	265	2 3/16"	3 5/16"	3 6/16"	3 7/16"	3 7/16"
	14	246	2 1/16	3 5/16	3 6/16	3 7/16	3 8/16
	15	243	2 1/16	3 4/16	3 4/16	3 5/16	3 8/16
About 1.35 put aside to drain then weighed, they were too soft to caliper.							
1.35 P M	13	268					
	14	249					
	15	247	About 1.40 fruit put out to again freeze if it will				
JANUARY 13, 1931. Fruit not sufficiently hard frozen to justify handling.							
JANUARY 14, 1931							
10.15 A M	Maximum temperature last night ± 42 F, Minimum ± 28 . Weighed all three fruits, # 13 the one we use the thermometer in is in bad shape which may account for the extra XXXX weight.						
	13	256					
	14	249					
	15	233	We are afraid that we may have made a mistake the weight of #13 and 15 but if so we were not aware of it at the time.				

Data Concerning Defrosting and Refreezing Tamopan Persimmons.

Peiping, Chihli, China, JANUARY 12, 13, & 14, 1931.

Date & Time of Observa- tions.	Tempera- ture		Interior Fruit Temp.		Astr- ingent, Little, Much, Non.	Frozen hard, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{1}{4}$, hard, Considerably, Little, Defrosted.
	Out- side	In side	in Air	in Water		
Fruit brought in a little after 11.00 A. M. and after weighing and calipering were placed in water to defrost. Maximum temperature outside last night ± 32 F. minimum ± 14 F. Fruit fairly well frozen.						
11.20 A M		Room ± 17 F	WATER ± 14 C	- 7 C	Fruit quite hard.	
11.30		18 F	10 C	- 6 C	" softening just a little	
11.45		"	5 $\frac{1}{2}$ C	- 4 $\frac{1}{2}$ C	" about $\frac{1}{4}$ defrosted.	
12.00		F.	5 C	- 3 $\frac{1}{2}$ C	" $\frac{1}{4}$ to $\frac{1}{2}$ defrosted.	
P 12.15 M		"	4 C	- 3 C	" $\frac{1}{2}$ to $\frac{3}{4}$ "	
12.30		"	6 C	- 2 C	" fully $\frac{3}{4}$ defrosted.	
12.45		19	5 C	- 1 $\frac{1}{2}$ C	Fully defrosted and soft	
throughout. After draining they were weighed but on account of their softness were not calipered. Put out 1.35 P. M.						
JANUARY 13, 1931.						
9.00 A M	Fruit not sufficiently frozen to justify working with today.					
Maximum temperature outside last night ± 32 F minimum ± 20 F.						
JANUARY 14, 1931.						
10.15 A M	Fruit still too soft to use in defrosting experiments. We weighed it and then returned it to the sill of the window outside. Maximum temperature outside last night ± 42 min. ± 28 F. Fruit #15 mechanically injured and in bad shape. This may account for the excess in loss in weight. Color of fruit in general fair. Color of flesh fair, flesh a little stringy, very sweet, carpels crisp. Quite a little astringency, put fruit back in window to freeze if it will.					

TESTING A FROSTED AND DEFROSTER PERSIMMON
FOR ASTRINGENCY.

~~CONFIDENTIAL~~

January 11, 1931 we took a hard frozen fruit from the outside of the room on the window sill, brought it in to the office room and cut out $\frac{1}{4}$ of the fruit and tested the $\frac{1}{4}$ for astringency while frozen (we made our readings on, little, much and non ast.) The first $\frac{1}{4}$ while hard was astringent much. After defrosting both the $\frac{1}{4}$ and the $\frac{3}{4}$ pieces we again tasted the $\frac{1}{4}$ and found it still much astringent. Put the $\frac{3}{4}$ piece out and let it refreeze.

On the night of the 11th. the max. was 124 F, min. 18 F.

January 12, 1931

Brought in the $\frac{3}{4}$ piece of persimmon and cut off another $\frac{1}{4}$ and tested it before it was defrosted and found it much astringent. After the 2nd. $\frac{1}{4}$ and the remaining $\frac{1}{4}$ was defrosted we tried the 2nd. defrosted one $\frac{1}{4}$ and found it ~~much~~ a little astringent. We put the $\frac{1}{4}$ of the persimmon out on the window sill to freeze during the night.

January 13, 1931

The $\frac{1}{4}$ persimmon is not sufficiently frozen this morning to justify continuing the test for astringency, today.

January 14, 1931.

Outside maximum temperature last night 1 42 F, minimum 1 28 F. The half put out on the night of the 13th. although quite soft is also quite astringent.

It is a chance perhaps that the fruit we happened to select was astringent another one may not have been. The point is, however, that after two defreezings the fruit was still a little astringent.

P. H. Dorsett's Notes.
Thursday, January 15, 1931,
Peiping, Chihli, China.

Put in practically the entire day getting samples of Abutilon avicennae, "Ch'ing Ma" imitation silk, taffeta and satin in shape for a special report on this fiber plant.

Because of the modified weather conditions we made practically our final notes on the persimmon defrosting and refreezing experiments with fruit brought in Friday, January 9th from the open air storage bed at Mr. Chi's place in the village of Hsiang Tang, some 25 miles to the north of Peiping.

W. J. Morse's Notes,
Thursday, January 15, 1931,
Kyoto and Okazaki, Japan.

We spent part of the day with Professor Namikawa who took us through some of the farming sections and gardens about Kyoto. Soybeans are raised only on the edges of the rice paddies and are harvested for grain which is used by the family.

Some stores were visited and some new products from Natto and soybean flour were found.

Professor Namikawa thought it would be well for us to visit Okazaki to study the manufacture of black miso as this is the only place in Japan where such a product is made. We left Kyoto at 4:00 P.M. and arrived at Okazaki at 9:27 P.M.

W. E. Brown's House,
Thursday, January 14, 1931.
Helsing, China, Japan.

But in practically the entire hill region
of similar evidence, "the" hill, Helsing, China, Japan
and also in China for a report on this line
plant.

However at the Helsing region, Helsing, China, Japan
practically all the time to the Helsing region
and Helsing region, Helsing, China, Japan
January 14, 1931, the day the Helsing, China, Japan
plant is the village of Helsing, China, Japan
north of Helsing, China, Japan.

W. E. Brown's House,
Thursday, January 14, 1931.
Helsing, China, Japan.

Report part of the day with Helsing, China, Japan
was taken on through part of the Helsing region and
Helsing, China, Japan. Helsing, China, Japan
edges of the Helsing region and Helsing, China, Japan
which is used by the Helsing, China, Japan.
Some Helsing, China, Japan and Helsing, China, Japan
from Helsing, China, Japan and Helsing, China, Japan.

Professor Helsing, China, Japan is used by the Helsing, China, Japan
to Helsing, China, Japan to study the Helsing, China, Japan
as Helsing, China, Japan is the only place in Helsing, China, Japan
in Helsing, China, Japan. Helsing, China, Japan, and Helsing, China, Japan
Helsing, China, Japan at 2:30 P.M.

XXXXXX

Peiping, China.
January 15, 1931.

Mr. Cabot Coville, Vice Consul,
American Consulate,
Dairen, Manchuria.

Dear Mr. Coville:

I am considerably worried for fear that Mr. or Mrs. Morse or their daughter, Margaret, may be ill.

In Mr. Morse's last letter, bearing date of December 10, 1930, he said that he hoped shortly to complete his work in that section and would his way back.

On December 25th I replied to his letter of the above date, and since then have written him several short notes, but to date, have had nothing from him in reply.

In case you know of any of the family being sick, please advise me, and also let me know whether their condition is such that you think I could be of any assistance by coming to Dairen.

There is, of course, a strong probability that Mr. Morse did not have an opportunity to write before leaving Dairen on account of the extra work involved in getting packed up and shipping for the States, maybe via Japan.

I am sorry to trouble you in this connection, but will be very much obliged for any information you can give me relative to the Morses and their whereabouts.

My daughter joins me in kind regards and best wishes to you and Mrs. Coville and your son.

Very truly yours,

P. H. Dorsett,
Agricultural Explorer,
Dorsett & Morse Agricultural Expedition.

PBD/rc.

P. H. Dorsett's Notes,
Friday, January 16, 1931,
Peiping, Chihli, China.

The maximum temperature outside our office window today was 56° F. and the minimum 26° F; attic room, maximum 60° F and minimum 50° F.

It has been a beautiful sunshiny day and we enjoyed our ride to the persimmon storage yard at Haiang Tang where we arrived about 10:30 A.M.

About 11:00 o'clock we changed the chart on the clock. The chart we removed is not quite perfect owing to the fact that the red pen did not register a complete circle. Otherwise it is o.k. and even the non-continuous registration of the red pen, we believe, will not variate the reading of this record.

We placed an extra record chart on the dial today and when we left for our return to Peiping after weighing the six batches of fruit we are making notes on, all three pens were making nice records.

The 50 fruit we got from the storage bed today were not nearly so hard frozen as the fruit was last Friday. The weather has moderated a lot since last Friday, January 9th. On that date when we arrived at the storage yard at eleven o'clock, the Centigrade thermometer #3, which hangs in the trunk, registered 4° below 0° ; between 1 and 2 o'clock last Friday it was 14° below 0° , while today it was 0° C.

There is only slight loss in weight of the ten fruit weighed each week and returned to the storage bed. The loss in weight of a similar set of ten fruit weighed in

the attic room and returned to the table (where we still have such sets) is considerable.

With the fruit taken in today we have only three sets of ten fruit each in the attic out of seven sets, with today's, which in part or full we are still weighing and measuring at the storage yard.

Today while weighing and measuring the sets of fruit at the storage yard we noticed some of the fruit showing small circular spots from a mere speck to a spot up to, in some instances, as much as a quarter of an inch and maybe more.

The spot is depressed and is of lighter color than the rest of the fruit. It looks as though the tissues may be breaking down and the skin following the shrinkage. This may be the result of some storage trouble. We plan to call this to the attention of Mr. Chi when we go out next week to see if he knows of the trouble and its cause, and also to learn, if possible, if it ever becomes troublesome and if so under what conditions.

We were surprised to learn today that Mr. Morse, the Manchurian contingent of the Dorsett and Morse Agricultural Expedition left Dairen the latter part of December for Tokyo, Japan. We understand that he, with his family, plan to leave there sometime in February on their return home.

W. J. Morse's Notes,
Friday, January 16, 1931,
Okazaki and Anjo, Japan.

The landlady of the inn advised us last night that there are two factories in Okazaki making the famous Okazaki black miso. Early this morning she phoned one factory but the master was absent so the assistant did not know about receiving visitors. She then phoned the other factory and the master said he would be very glad to have us come and to show us through the factory.

We found the Kyuemon Hayskawa Miso Co. factory about three miles from the inn. The master of the factory took us through the plant and explained each step of manufacture. Okazaki miso is made entirely from soybeans while other forms of miso are made from rice and soybeans. It takes twenty months to cure black miso. This company sells about 50,000 kan yearly.

Okazaki miso keeps indefinitely and is used in making soups and preserving vegetables. At breakfast in the inn this morning we had black miso soup and found it had a much better flavor than red miso soup. The black miso is also sometimes used in making a form of soy sauce by adding water.

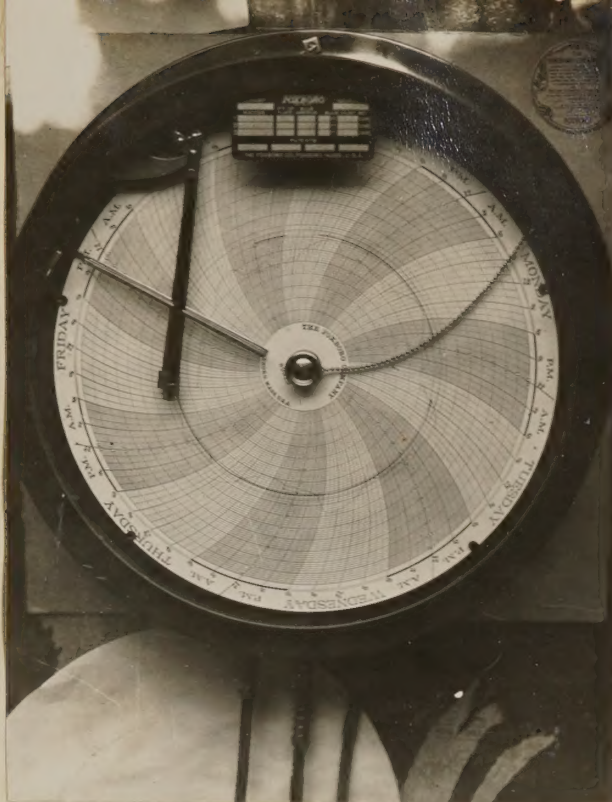
After our visit to the miso factory we went to Anjo where the main agricultural experiment station of the Aichi Prefecture is located. We met the director, Mr. Shinto Kanai, to whom we had a letter of introduction from Mr. Sato, S. M. Ry., Dairen. The work carried on by this station consists of animal husbandry (mostly poultry and hogs),

horticulture, chemistry and soils, and rice breeding.

The station has used soybean oil cake in feeding experiments with cattle, hogs and poultry about ten years. For five years it has cooperated with the S. M. Ry. in soybean oil cake feeding experiments. At the present time quite a lot of work is being done in soybean oil cake feeding experiments with poultry.

Aichi Prefecture is one of the leading poultry sections of Japan. In Japan there are 46,000,000 head of poultry, of which 6,000,000 are in the Aichi Prefecture. Poultry feed consumed in this prefecture amounts to Yen 18,000,000 yearly, of which only forty per cent is produced locally. About Yen 8,000,000 of soybean oil cake is used in the prefecture but largely for rice paddy fertilizer. However, the use of the cake for cattle and poultry feed is increasing rapidly.

The station is doing no work with soybeans which are grown only on the edges of the rice paddies by the farmers. The crop is raised for seed which is used in the home manufacture of miso, soy sauce and bean curd. Several varieties are grown by the farmers and Mr. Kanai said he would collect some and send us.



#46447- Clock registering thermometer. A fairly nearby view of the clock with a chart in place. Upon this chart there is 3 records one of the air, one of the fruit near the top of the persimmon bed and one near the bottom of the bed. The thermometer was installed in a winter storage bed on the place of Mr. Chu Li Chi, in the village of Hsiang Tang some 25 miles to the North of Peiping, China. Jan. 16.31.

#46448- Soja max, soybean miso (Black) Okazaki, Japan. Okazaki, black, miso made wholly from soybeans curing in large wooden casks or tubs.

The material cures in these casks or tubs twenty months before it is ready for use.



#46449-Soja max. Black soybean miso curing in casks, Okazaki, Japan. January 16, 1931, D&M

Okazaki, black, miso made wholly from soybeans curing in large wooden tubs or containers. The miso remains in the containers 20 months before it is ready for use. Black miso is used for soups and preserving and is only made in Okazaki.



#46450- Soja max. Black miso curing in wooden containers at Okazaki, Japan. Jan 16, 1931, D & M

Okazaki black miso is made wholly from soybeans and cured in large wooden containers as shown here and in the two previous pictures. Black miso is used in soups, and in preserving vegetables. 1200 pounds of stone are used to weight the miso material.

P. H. Dorsett's Notes,
Saturday, January 17, 1931,
Peiping, China.

At ten o'clock this morning we went to the Tung Shun Florist Shop at the bazaar on Morrison Street and got instructions and a good demonstration of the cutting of Chinese sacred lilies for the purpose of dwarfing the plants. Dorsett and Dorsett reported on this practice in 1924 but did not get all the details.

This time we will not only see and get details about the cutting, but of removing the accumulation of the slimy exudation from the cut surface after the bulbs have been soaked for 24 hours, and then after the first removal of the gummy substance soaking another 24 hours, and then the final treatment. It will be Tuesday or later perhaps before we get all the details. When we do, we will give details regarding the practice.

After tiffin we worked on the assorting of our pictures for albums and completed and paged our field trip report for the month of October 1930. It includes pages 6020 to 6326, inclusive.

We are very much in hopes that we will be able to complete the quarterly report for the quarter ending December 31, 1930 and get it on its way to Washington before we have to leave Peiping, about March 15th via Shanghai on our return home.

This has been another nice day but we would say a little warm for this time of year. The maximum temperature was 52° F and the minimum 47° F. out our office window.

W. J. Morse's Notes,
Saturday, January 17, 1931.
Tokyo, Japan.

On our way to the S. M. Ry. office we stopped at the Dollar Steamship Line Office to see about reservations for San Francisco. Mr. Conway advised that travel is very light both east and west. The world depression seems to have hit the steamship business as well as other things. He was anxious to know if we were connected in any way with the Embassy, Consulate or with the War or Navy Departments. If we could claim any connection, we could obtain a twenty-five per cent reduction in the boat fare. In looking up the regulations it was difficult to see any way we could obtain this reduction in fare. In view of the large number of agricultural men traveling for the government, Mr. Conway is going to bring the matter to the attention of the Dollar Line Co. to see if the fare reduction cannot be given to officials of the Department of Agriculture as well as to those of the State, War and Navy Departments.

At the S.M.Ry. office, Mr. Matsuda, agricultural engineer, advised that a special conference on soybean oil cake feeding experiments was to be held the coming Wednesday at the Hog Breeding Farm at Tachikawa. He thought it would be well worth our while to collect data on the experiments to be seen and discussed. It was stated that many of the experiments in which excessive amounts of soybean oil cake were used had not turned out very well. We were given some more publications relating to results obtained in feeding soybean oil cake, soybean curd mash, and soybean sauce mash to cattle, hogs, and poultry.

P. H. Dorsett's Notes,
Sunday, January 18, 1931
Peiping, China.

We spent the entire day mounting pictures for our albums. We are trying to get them up-to-date, but are more or less handicapped, first because we have not received any pictures from Mr. Morse since early in December and second because it looks as though we will not have sufficient mounting sheets and we are unable to secure the kind we are using here in Peiping.

P. H. Dorsett's Notes,
Monday, January 19, 1931.
Peiping, China.

We worked on the mounting of pictures in our albums until after dinner tonight, when our mounting sheets gave out and we had to quit before getting all the pictures in the albums.

From about nine o'clock until almost eleven this evening we wound off treated fiber of Abutilon avicennae for making small exhibits. This fiber is treated to make it usable in the weaving of imitation silk.

Tomorrow we will try and wind off samples of the floss, Abutilon avicennae, "Ch'ing Ma" fiber, which is used wool in the making of imitation Chinese silk.

It was sunshiny and considerably warmer today and it feels quite a good deal warmer tonight.

W. J. Morse's Notes,
Monday, January 19, 1931,
Tokyo, Japan.

In a talk with Prof. Okazaki of the Tokyo Agri. Coll. we were told that Dr. Asawa of the Imperial Agricultural College was doing considerable work with legume cultures and also green manuring. He advised that it would be well to make an appointment with Dr. Asawa who could give us considerable data on soybean, gonge clover, and other legume cultures as well as the use of various green manure crops in Japan.

Seed and product material was checked and packed and parcel packages numbers 239 and 249 made ready for shipment by diplomatic pouch to the Office of Foreign Plants.

At evening supper we had for dinner beef preserved in white miso. After broiling, the flavor of the meat reminded one of that of the sugar cured hams of our Southern States. The meat had been cured just eight days and was well flavored through.

P. H. Dorsett's Notes,
 Tuesday, January 20, 1931,
 Peiping, China.

Worked on straightening out our picture negatives from July 30th to January 1, 1931, and on getting specimens of Abutilon avicennae fiber, "Ch'ing Ma", in shape for a special report on this fiber plant which we hope to whip into shape before we have to leave Peiping.

This morning was cloudy and looked like rain or snow, but later in the day it cleared up. Tonight appears to be quite a little warmer than it has been for several nights past.

W. J. Morse's Notes,
 Tuesday, January 20, 1931,
 Tokyo and Tachikawa, Japan.

We called at the S. M. Ry Office where we met Mr. Matsuda and some other men who were going to visit the Hog Breeding Farm at Tachikawa. Arriving at the Farm we were met by the director who first gave us the results of the soybean oil cake feeding experiments up to the present time.

Four series of feeding experiments with hogs and pigs are being run, using different percentages of boiled rice, barley and soybean oil meal in the standard feeding mash. With young pigs the different variations of mash are given in addition to the mothers milk. With young pigs the feeding experiments were started when the pigs were two (2) days old.

From 3-5 weeks the young pigs fed mash with 40% soybean oil meal made very rapid gains but then began to de-

velop serious stomach trouble (is it any wonder with a 40% bean cake feed?). After four to five weeks all of the pigs had died which were on the 40% bean cake meal feed. Knowing the high content of protein (44-46%) of soybean oil meal, it seems rather a drastic move on the part of the experimenters to start 2-day old pigs on a mash containing nearly one-half highly nitrogenous feed.

In the standard mash used by the station rice bran, barley bran, wheat bran, corn meal, soybean oil meal, fish meal, salt, and calcium carbonate are used. The analysis of this feed is as follows:

Standard Hog Mash.

	Per cent.
Moisture -----	10.26
Protein -----	17.13
Fat -----	8.79
Carbohydrates -----	43.60
Fiber -----	7.24
Nutritive Ratio 1:5.16.	

F. H. Dorsett's Notes,
Wednesday, January 21, 1931.
Peiping, China.

Put in the day at the office working on our report, negatives, lantern slides, etc., We also packed a parcel post package of seed and plant material to go forward shortly to Washington.

During the day we received a letter from Mr. Cabot Coville, American Vice-Consul at Dairen. This was in response to our letter to him under date of January 15th requesting him to let us know, in case he knew, whether or not any of the Morse family were sick. A copy of his letter, which is self-explanatory, follows today's notes.

W. J. Morse's Notes,
Wednesday, January 21, 1931,
Tokyo, Japan.

We visited the Institute of Physical and Chemical Research where we met Dr. U. Suzuki, Prof. of Biological Chemistry at the Tokyo Imperial University and Chief Chemist at the Institute of Physical and Chemical Research, to whom we had a letter of introduction from Mr. Sato, S.M. Ry. Dairen.

The S. M. Ry. Bureau of Agriculture has a special cooperative arrangement with the Chemical Division of the Institute through which Dr. Suzuki is making a thorough study of the utilization of the soybean and its products. The S. M. Ry. is especially anxious to increase the use of soybean oil cake in Japan other than for fertilizing purposes.

In his work, Dr. Suzuki has been especially interested in the foods of the Japanese people. Next to rice the

soybean is the most important food. Ninety-seven per cent of the food of the Japanese people is vegetable, two per cent marine products, and one per cent meat. Of the vegetables 12 per cent is protein and 85 per cent carbohydrates, an extremely wide nutritive ratio. Much of the vegetable protein is supplied by beans, especially the soybean.

Dr. Suzuki has done much experimental work in the use of soybean flour from extraction process bean cake or meal. Much of the work has been done in cooperation with Tokyo bakeries. The bakers have not been successful in making a good bread containing more than 20 per cent soybean flour and 80 per cent wheat flour.

With reference to Soyasint, Dr. Suzuki advised that this is a soy sauce substitute - one-half chemical and one-half fermentation. We were given considerable data on other soybean products and also publications.



#46451- *Narcissus taruta Orientalis*, Chinese sacred lily. A nearby view of bulbs which have been cut for the purpose of dwarfing the flower stems. After the leaves get fairly well started one side of each leaf is cut away, this causes the leaves to curl in the direction of the injured edge.



#46452- *Wisteria* sp. Chiba, Japan, Jan 22, 1931. D & M.
Wisteria vines used as shade for hog yards at the Chiba Zootechnical Experiment Station.



#46453- *Pueraria thumbergiana*, Kudzu for shade. Chiba Japan, Jan 22, 1931.

Kudzu vines used for shade for hog yards at the Chiba Zec-technical Agricultural Experiment Station.



#46454- *Diospyros kaki*, Donkey panniers or baskets used in the transportation of persimmons and other products. In this instance the panniers are loaded with large Chinese persimmons. This is at the storage yard of Mr. Chi Li Chu at the village of Hsiang Tang some 25 miles to the North of Peiping, Chihli, China. June 23, 1931. D & M

P. H. Dorsett's Notes,
Thursday, January 22, 1931,
Peiping, Chihli, China.

In the morning we made notes on persimmons we are holding in the attic for this purpose.

The florist from the Bazaar on Morrison Street came to the hotel and showed us about removing the inner coat of the shoots of narcissus bulbs, a rather delicate operation. After removing this sheath he wet the bulbs and put them on pan in front of one of our office windows. He told us to sprinkle them three or four times a day and to let them remain there until Monday afternoon when he will come again to show us how to cut the leaves.

The growing shoots are making fine growth and coloring up nicely. This has been a very interesting experiment. The flower buds are showing up nicely and we are much interested to see the result of our cutting both on the leaves and the flower stems as well as the flowers themselves.

Tomorrow we go again to the persimmon storage bed at Hsiang Tang, Chihli, China, some 25 miles to the north of Peiping.

W. J. Morse's Notes,
Thursday, January 22, 1931,
Chiba, Japan.

We left early in the morning for Chiba where the Imperial Dept. of Agriculture's Animal Industry farm is located. We had letters of introduction to the director, Dr. K. Kimura, from Mr. Sato, S. M. Ry, Dairen and Mr. Matsuda, S. M. Ry, Tokyo.

The animal industry farm, known officially as the "Zootechnical Experimental Farm" is located on the outskirts of Chiba and has about 65 hectares of land. It is a similar institution to the U. S. Dept. of Agriculture Animal Industry Farm at Beltsville, Md. The station has well equipped laboratories for chemistry, dairy and meat products, forage crops, and also up-to-date dairy and cattle barns and poultry houses. Experimental work is carried on with dairy and beef cattle, hogs, rabbits, poultry and bees.

In the dairy cattle work, Holsteins are used and some very high grade stock for breeding has been imported from the U. S. Soybean oil meal to the extent of 20% is used in the standard dairy mash. Up to the present year, corn-soybean silage was used - 80% corn and 20% soybeans. The growing of silage crops was discontinued because of insufficient land. In the dairy products line, experiments are being conducted with butter, cheese, milk powder, condensed milk, milk casein and even soy sauce. Milk casein and soy sauce are made from skimmed milk.

With hogs, the Middle White Yorkshire breed is chiefly used although some work is being done with the Berkshire, Du Roc and Poland China breeds. About 5% soybean oil meal is used in the standard hog mash.

The station is doing a very considerable amount of work with poultry. Soybean oil meal with minerals in the standard mash has given more economical results and better quality eggs than fish meal. A large number of experiments are being run with soybean oil meal for egg and flesh production.

Several breeds of rabbits or hares from European countries

W. J. Morse's Notes,
January 22, 1931 (continued).

America, Japan and New Zealand are being bred and fed for fur and flesh production. Soybean oil meal and soybean curd mash are used in some of the feeding experiments.

In feeding experiments with hogs, poultry, dairy and beef cattle, and rabbits, soybean meal, soybean curd mash and soy sauce mash are used in varying amounts in comparison with fish meal. Soy sauce mash is used only in hog and cattle feeding work.

We were given several publications containing results of feeding tests in which soybean oil meal, soybean curd mash, soybean hay, and soybean-corn silage were used.

XXXXXXX

Peiping, China,
January 22, 1931.

Mr. Cabot Coville,
American Vice Consul,
American Consulate,
Dairen, Manchuria.

Dear Mr. Coville:

Many thanks for your letter of January 19th in response to mine of the 15th relative to Mr. Morse and family. I am very much relieved and gratified to learn that they are apparently enjoying good health.

Mr. Morse in his letter of December 10th wrote that he had about concluded his soy bean investigations and would soon be wending his way homeward, but did not say when they contemplated leaving Dairen or when or how they would return to the States. I assume that the reason for my not hearing from him is as you suggest.

We have very much enjoyed our stay here in Peiping: it is a most interesting city. We have been investigating a most interesting horticultural problem: that is, the fall curing of persimmons by means of a hot water treatment to remove their astringency and also the open air storage of persimmons in beds on the ground for the winter market.

We plan to leave Peiping about March 15th and to sail from Shanghai for the States on March 27th, 1931.

My daughter joins me in kind regards and best wishes to you and your family.

Very sincerely,

P. H. Dorsett,
Agricultural Explorer,
Dorsett & Morse Agricultural Expedition.

PHD/rd.

7016 In reply refer to
File No. 102.7
CC:L

AMERICAN CONSULAR SERVICE

American Consulate, Dairen, Manchuria, January 19, 1931.

P. H. Dorsett, Esquire,
c/o The American Legation,
Peiping, China.

Dear Mr. Dorsett:

I have your letter of January 15, 1931, in which you say that you fear that Mr. or Mrs. Morse or their daughter may be ill. As far as I know they are all in good health. They left here for Japan by one of the Kobe boats on December 18, 1930. The only address that they left is the American Consulate General, Tokyo. I am quite sure that the reason of his failure to reply to your letters was the rush of affairs in preparation for leaving followed by the difficulties of receiving them while on the move.

I hope that both you and your daughter are well and enjoying your stay in Peiping.

Very sincerely yours,

(s) Cabot Coville,
American Vice Consul.

XXXXXX

Peiping, China,
January 22, 1931.

Mr. W. J. Morse,
c/o American Consulate,
Tokyo, Japan.

Dear Mr. Morse:

We were surprised to learn yesterday, through a letter from the American Vice Consul at Dairen, that you left there on December 18th. He gave as your address c/o American Consulate, Tokyo, Japan.

We hope that you and the family enjoyed a pleasant Christmas in Tokyo and that your work is progressing satisfactorily.

On account of the unusually moderate weather in Peiping at this season, our work of defrosting and refreezing perishables has been more or less interrupted, but even so our work is progressing quite satisfactorily.

We plan to leave Peiping on or about March 15th for Shanghai. We want to spend a few days over in Hang Chow and will then return to Shanghai and expect to sail from there aboard the U. S. President Pierce scheduled to sail from that port March 27th and to arrive in San Francisco on the 15th of April.

We contemplate visiting Chico, Bellingham and Rockford, Illinois en route home from Frisco. In this event it will be the last of April or early in May before we reach Washington. By that time I presume that you will be up to your eyes in your home work.

We wish you one and all a safe and most pleasant voyage back to the States and also a fine trip across country, and a most hearty welcome home, which we are confident you will receive.

Please do not forget to give us a copy of your account for November, also your notes and pictures up to the time of your sailing from Yokohama.

We are now typing our November report. We plan to finish it and also December so that we can send in our two quarterly reports for this fiscal year, July to September

W. J. H.

-2-

1-22-31.

and October to December as well as to complete January and February before we leave Peiping. Please do the very best you can to help us to accomplish this end.

I trust that you will not overlook my request in a previous letter for the note books of the records of our collections and introductions so that I can add our introduction numbers from Peiping and make up our report in detail for presentation to Mr. Ryerson when I return to the Office.

I am inclosing a copy of a recent letter to Mr. Ryerson which is self-explanatory, also a few newspaper clippings from Washington and two from the Peiping Leader in which you may be interested.

We send you and yours greetings and best wishes and hope to have the pleasure of seeing you in Washington.

Sincerely yours,

P. H. Dorsett,
Agricultural Explorer,
Dorsett & Morse Agricultural Expedition.

PHD/rd.
Incls.

P. H. Dorsett's Notes,
Friday, January 23, 1931,
Peiping and Hsiang Tang, China.

We left the hotel about 8:45 this morning and arrived at the persimmon storage yard at Hsiang Tang about 10:30.

It was a bright sunshiny morning and the automobile ride to the foothills was much enjoyed.

Upon opening the trunk in which the clock recording thermometer is installed, we found that the clock had run about 11 hours slow since our last visit. The clock has been running a little fast ever since it was started. When here last we tried to correct this and apparently over-did the job. We shifted the speed lever to a little faster today. The arc of the speed lever is not graduated, which we think in an instrument like this is a serious mistake, and it is difficult to determine with any degree of accuracy what one is doing, what one does is more or less guess work.

We shifted the lever to increase the speed of the clock, changed the charts, which by the way, with the exception of the slow record and a short space of a few hours when the red ink pen did not record, the chart removed appears to be o.k.

Tomorrow we will return to see how accurately we have guessed.

Today 1st grade large persimmons are worth	\$7.80	per 1000.
2nd " " " " "	7.30	" "
3rd " " " " "	5.00	" "

On account of the very mild weather which we have been having for some little time and which is still prevailing, none of the fruit in the beds are very hard frozen. The

sets we are weighing and calipering in some instances are almost too soft to handle. The color of the fruit, however, still continues to be excellent.

Today we tried a picture of two man-carrying baskets which were full of persimmons. When full in this way they hold 100 each or 200 persimmons for a man-load, which is about 100 pounds more or less.

The Centigrade stem thermometer #3 hanging in the trunk registered 0 at 10:30 this morning.

W. J. Morse's Notes,
Friday, January 23, 1931,
Tokyo, Japan.

In the morning Mr. Owen Dawson, Agricultural Commissioner, and Mr. F. J. Rossiter, Asst. Agricultural Commissioner, called at the hotel after a visit to the American Consulate. They had just arrived on the President McKinley and are on their way to Shanghai, China, to relieve Mr. Paul Nyhus, present Agricultural Commissioner. As they are to make surveys of crop conditions in China and Manchuria they wished to obtain information as to the best sources of securing data especially the soybean in Manchuria.

After our visit, Mr. Suyetake and I went to the Imperial College of Agriculture to visit the Department of Animal Husbandry, to the chief of which we had a letter from Mr. Sato, S. M. Ry, Dairen. The chief was absent on a trip but one of his assistants advised that considerable work was being done toward recommending greater use of soybean oil cake as feed to cattle, hogs and poultry. Animal Husbandry Experiment stations throughout the country are conducting tests in cooperation with the S. M. Ry. with soybean oil meal, using larger amounts of the meal in mixed feeds than have been previously used.

XXXXXX

Peiping, China.
January 23, 1931.

Mr. Knutson A. Ryerson,
Principal Horticulturist in Charge,
Foreign Plant Introduction,
Bureau of Plant Industry,
U. S. Department of Agriculture,
Washington, D. C.

Dear Mr. Ryerson:

Upon returning this afternoon from the persimmon storage yard at Hsiang Yang, some 25 miles to the north of Peiping, I found your welcome letter of December 20th awaiting the shears and the reading.

Peiping is not by any means a bad place in which to spend a winter. It is dry and while cold, not too cold for comfort. Friday, January 9th was the coldest weather we have had. It was -4° C. at 10:30 a.m. when we reached the persimmon storage yard and by 1:30 p.m. when we had finished our weights and notes the thermometer registered -14° C. But even that, you know, is not very cold.

We had to discontinue our experiments on defreezing and refreezing of persimmons on account of it not being cold enough for us to freeze the fruit on the window sill of our office room.

I talked over our official finances with Morse when he was here. At that time he thought he would be able to get an advance of funds from his office for his work in case he stayed longer than he planned on last spring. Since his return to Dairen, I have written him several times and told him in one or more of the letters to let me know as soon as possible in case he found that his allotment would not enable him to complete his work over here as he would like to and get him home, and I would readjust my plans even to curtailing work planned so as to be able to help him out.

To date I have not had any word from him regarding this matter. I have, since the reading of your letter, written him in some detail on this subject and am inclosing a copy of my letter to him for your information.

It looks as though Dorsett and Morse will have a job of motion pictures awaiting their return. Well, when we get back we will see what can be done.

Mr. H. A. H.

-2-

1-23-31.

We wish Mr. Erlanson a safe, pleasant and successful trip to Mexico.

The Armour, Fairchild, Collins and Kempton Expedition is a good combination and should certainly prove a winner. Many thanks to Mr. Armour for wanting me along.

We note what you say about going "to Bahai again to secure some of the orange types D. P. and S. got that did not survive." If my memory serves me correctly, some of all these types were saved and later thrown out at Washington. Write to Shenel about this and see what he has to say on the subject.

We will see what can be done about the "watermelon of great size". It is quite an undertaking to run down a "watermelon of great size" in China, without the Chinese name and even with it, you can never tell whether you have the right one or not. However, we will do the best that we can.

We surely hope that you will be successful in getting some of the unemployment relief money to assist in putting our gardens in good shape.

There surely is no question but that we need, and need badly, new assistants in the office. I think that we also need and should have foreign exploration work for next year. I do not think it a good policy to let a year pass without at least one explorer in the foreign field.

With sincere good wishes and best regards, I remain

Sincerely yours,

PHD/rd.
Incl.

P. H. Dorsett,
Agricultural Explorer,
Dorsett & Horne Agricultural Explorations.

Washington, D. C.,
December 20, 1930.

Mr. P. H. Dorsett,
care of American Legation,
Peiping, China.

Dear Howard:

I was very glad to get your letter of Nov. 20 and to learn how you were and of your tentative plans, as with the very severe winter coming on we were not very comfortable about the outlook for your work in the climate of Peiping. I have been looking for you back here around Christmas time, as indicated earlier in the year. I am glad the doctor says you are in pretty good shape but I want to emphasize the importance of what he has said of your being careful. The strain of your last illness does not leave you in any too good shape for exposure in the winter, and working around outdoor persimmon storage areas is hardly to be recommended for one recently seriously ill with pneumonia as you have been.

Now as to finances. We are unable to secure any additional funds for the work of the expedition and it will have to complete its work in accordance with the budget of \$8,000 made available to July 1, 1931. Of course, conditions have changed materially from what I wrote you last, as we expected to get you home as quickly as possible after your recovery and did not intend that you should carry on this winter since we figured you had played around St. Peter's Gate too long altogether last spring and we did not want to take any more chances. Please don't hang around the gate again and tempt his good nature, or throw rocks at the door either. He might come out and grab you before you had half a chance. As written you in my letter of April 16, the division of the allotment was not arbitrary but depended upon the conditions in the field, which you people would have to decide. It was our understanding then that Morse wanted to be home for Christmas and planned that way.

For the present plans of yourself and Morse, I can only say this - that we can not add to the allotment to increase Morse's work and if any additional funds are needed to enable him to complete it, they will have to come through a curtailment of your activities in Peiping. We received a letter from Morse recently in which he said at that time he would let us know shortly as to his exact plans and when he expected to return. You will have gotten sufficient records covering the main storage seasons so that even if you are not able to stay until they are ready for market, you will have the main facts and temperature conditions can be assembled here under laboratory conditions to extend any observations that may be required to study the reaction of frozen fruit.

Mr. P. H. Dorsett

-2-

Of course it is impossible at this distance to know just what would be required for winding up Morse's work in Manchuria. You men in the field know the situation better than do we. Please get in touch with Morse, find out what he is likely to require and arrange to complete your work and his within the allotment.

We have no prospect of funds or an extra appropriation for the tung oil work or any other work in the Orient, so that there will be no need of holding funds to continue you in the Orient until July 1. The tung oil appropriation recommended by the Secretary was thrown out by the Bureau of the Budget and has not been added on the floor by Congress.

At the Motion Picture Laboratory the other day they ran movies taken at the Summit, Canal Zone, Garden by Lindstrom, also those taken by Georgens in South America. They want to know if we can use them in connection with our film; quite a good many shots we can. When you return there will be considerable motion picture work waiting for you - those that you took before you went away, some that I took on the Canadian trip and haven't had a chance to finish up, and those from the present expedition, and then those shots from Georgens and Lindstrom. There is material enough for some good films, also the indexing and filing of all of our motion picture films which are just where you left them. The Vitacolor is clear off the market. It was an interesting experiment but has not been continued because of the development of the Multicolor process, and at the present time the only color available for amateurs is Kodacolor.

Erlanson leaves tonight to join Souviron in Mexico City to complete the work that Russell, Souviron and Reddick carried out on the Solanums and also on the pochote for Doctor Dewey. Russell returned some time ago and Reddick returned week before last to resume his duties at Cornell University. Erlanson will go down and stay until March with Souviron and clean up this work.

Collins and Kempton plan to go with Mr. Armour on the yacht to the West Indies, through the Canal and up the west coast of Mexico and Central America. Mr. Armour would like to have ^{had} you along and spoke about it when plans were under way for the trip. Had you been here, we might have persuaded him to go on down to Bahai again and secure some of the orange types you and Shamel got that did not survive.

We got a letter recently from Baltimore quoting a letter written in the Baltimore Sun, describing a watermelon of great size produced in Chuhuangtsun in the Shantung District, China. I am wondering whether you might know of some one in that general vicinity to whom you might write and secure some seed. One of these wild shots might lead somewhere. Some missionary might be located who could secure some seed for trial.

Mr. P. H. Dorsett

-3-

I wish I could join you in seeing these persimmon storage areas and the orchards as well. I have been enjoying for breakfast recently Tamopans by cutting off the top and pouring in two or three tablespoonsful of good cream and stirring it all up. It is pretty hard to beat.

The President's unemployment relief bill is due for passage today. If it goes through, we may get some help from it for the stations, particularly where we can use labor. We hope so. Next year's appropriation carries no funds for foreign work and gives us very little for improvements at Chico. The results of this year's work, however, will keep us all busy for the next year. Doctor Taylor is very well pleased and says it has been the biggest year in plant introduction in the history of the Department. We are planning to get another assistant or two, one professional and one clerical, as we are carrying on largely with the same personnel we had when I came over three years ago. Everybody is carrying all that he possibly can and more. Any additional help will have to come from new personnel rather than rearranging work within the office.

With heartiest good wishes to you all, I am

Very sincerely yours,

(s) Knowles A. Ryerson,

Principal Horticulturist in Charge.

KAR:MMB

XXXXXX

Peiping, China,
January 23, 1931.

Mr. S. J. Morse,
c/o Imperial Hotel,
Tokyo, Japan.

Dear Morse:

Your welcome letter of January 17th reached me on the 22nd, and was enjoyed as much as a small boy would a big helping of ice cream.

On account of not having heard from you since early in December, we feared that you, Mrs. Morse or Margaret might be ill. We hope this finds you all enjoying the best of good health.

This may catch up with my last letter mailed before yours was received.

I regret that you did not give me any information about the state of your official finances. Today I received a letter from Mr. Byerson saying the \$8,000 in our allotment was all the money which can be had for this work and that it is to cover both your work and mine in the field and get us both back to Washington. I do not know if this can be done. I can make it on the \$5,000 allotment to me, but how about you?

According to my books, you have spent for July, August, September and October \$1,818.90, which, from your allotment of \$3,000, leaves a balance of \$1,181.10 to take care of your expenses here and get you back to Washington, which is as I figure, not enough.

To January first I have spent \$2,510.01, which leaves me a balance out of my \$5,000 allotment of \$2,489.99, which I figure is ample for my needs and perhaps a little to spare.

I am both surprised and worried on account of your not letting me know about your official financial condition. I have written you several letters concerning this matter and by not hearing, assumed that your allotment must have been somewhat augmented by funds from your office. I recall your saying, while here, that you had written Mr. Oakley about additional funds, and by not hearing from you, assumed your appeal was successful and surely hope that it was.

At any rate please let me know at once how you are fixed officially so that I can readjust my plans and save all that I can to help you out, *if necessary.*

I guess the combination Chinese, Russian and Japanese show was a little too much for you and others, but am delighted to know that all are o.k. now.

I sent you two clippings from the local paper about Manchurian beans which gave me a little insight into conditions in Manchuria. I can well imagine it is a rather embarrassing situation.

Yes, I remember Mr. Sato. In fact, sent Mr. Taylor a card to him. It is fine that you got so much out of your return trip to Japan which Mr. Sato suggested and helped make possible.

By this time you should be about at the saturation point on Oriental soybeans, in all its phases. You will have another big job working it up and making it useful.

Do not be too satisfied with your work, for from personal experience I venture the assertion that you could return in say two years, and find a lot of interesting varieties and data you do not now have.

We are still having our trouble with the recording thermometers. Were out today, clock running slow and one pen did not register for a few hours. Will go out again tomorrow. It is quite warm and the fruit in beds about thawed out. It now looks as though beds may be cleaned out by March first.

Yes, I am now weighing, calipering and making notes on about seven lots of perimmons, ten to each lot, at the storage yard and five lots of ten fruit each here at the hotel, besides daily fruit tests, and am about as busy as I can be but it is interesting and we hope to push through the rush.

I could use a chemist to good advantage for there surely is work along that line.

I am pleased to note that you expect to complete your notes, etc., up to the time of your departure and will send all, including record books, just before you leave.

When these arrive we will have more to do, but some of it can lay over until we are on the boat.

My last number (field) is 7704. I would like to complete these up to 7800, but do not think it will be possible on this trip. If you think well of the suggestion, suppose

Mr. W. J. H.

-3-

1-23-31.

you fill out my numbers starting with 7703 before going into the 8000's. If I get anything more I will number them after getting back to the office. I will not number anything else until I hear from you about this.

Thanks for your note about the persimmon form. I got up two more and am making daily and weekly use of them. A copy of each is inclosed for your information.

Well, the bunch about colors helped a little but not much. It simply cannot be correctly accomplished over here without an artist.

In case you visit the Oakleys give them our regards and tell them and also our friends in Washington that you saw us.

Hope that you have entirely recovered from your cold and are feeling o. k. All at this end of the line send best wishes to all at that end and wish you a bon voyage and a safe trip across the States.

Very truly yours,

P. H. Dorsett.

PHR/rd.

Agricultural Explorer.

Incls.

Dorsett & Morse Agricultural Expedition.

Tokyo, Japan,
Jan. 17, 1931.

Dear Dorsett:

Yours of the 25th and 30th of December received and I trust you will excuse my remissness in writing. My intentions have been good but "Tempus fugit" you know and the way time has flown for the last three months, I believe I am old "Fugit" himself. Every day I thought I would write you that night and so it has gone so tonight upon returning from a week's "soy saucing", "soy misoing" and "soy caking" and finding your letter of December 30, I decided to write at once.

I am not going into much detail as you will get most of that in the report which has been finished up to the first of the year. None of us have been down sick but Suyetake and I were nearly under the weather from our northern Manchurian trip. I do not know whether it was a single food or the mixture of Chinese, Russian and Japanese foods that did the business. I had a little trouble soon after returning from Peiping and so I suffered a little more than Suyetake. We kept going and appear to be o. k. now.

We left Dairen Dec. 18 and I wish I had the "pep" and time to write you of the state of Manchurian soybean affairs. I think you can get a line on the situation by reading the report and realize that the situation was becoming rather embarrassing for me on the soybean question. The soybean industry at present is at a low ebb in Manchuria with but little demand from Europe. It is the common thought throughout Manchuria that America is becoming their soybean enemy and will soon take away their European soybean trade. There is a nice little scrap on between the C. E. Ry. and S. M. Ry. in transporting beans and the collecting renters(?) (large) have been changed much since one year ago. It is my opinion that rather a nasty situation is developing in Manchuria.

No doubt you remember Mr. Sato of the S. M. Ry. who was at the Ry. Sta. Dairen to see you off. Last Fall, in October and November he spent time in Japan in looking up the utilization of soybean cake. After our return from Harbin, we had a talk with him and he said I should visit some stations and private concerns before going home to get information on uses of bean oil cake in Japan. Before leaving Dairen he gave us 12 letters of introduction ranging from Kobe to Tokyo. I do not believe Mr. Sato realized what the letters would lead to as it has proved to be a case of geometrical progression. Places we visit give us cards of introduction to others, and others to others. However, I am going to cut it short for if I kept on at this rate I would probably find myself somewhere in Manchuria again.

(2)

I am glad that I took Mr. Sato's advice for I have collected some very valuable data on soybean oil cake and some other products with which we did not come in contact with a year ago. For the past three weeks I have felt myself in exactly the same state you found yourself when you arrived at Peking last July. Before going to Peking you said you had scoured that region and did not believe much could be collected. Last March I said I was pretty well satisfied with the soybean products we had collected and did not think we left much to collect. With Mr. Sato's help, I find oil used for soy sauce, miso, poultry, cattle and poultry feed and have some excellent data along this line. In addition looking up the above, we found a nest of 60 soy sauce factories at Tatsuno near Kobe making a soy sauce quite different from anywhere else in Japan. At Okazaki we found black miso being made by two factories and have been making this product in the same manner at the same places for about 300 years. Previous to my return here I had nothing for soy oil cake except for fertilizer use, but now the uses as cited above. But I must not write any more or it will develop into a report and the report will give you a better idea.

From your letters, it seems that work is piling up for you in about the same progression as it has been for me. I trust that you now have the recording thermometer in good working order and it is turning out perfect sheets. It is pleasing to learn that you are finding the persimmon work so interesting. I wish you had a chemist working along with you for I feel that some mighty fine data could be obtained to go along with the storage studies. It seems too bad that many times important work can be only one-half done.

With reference to the record books and D. & M. nos. I will send them just before leaving and will inclose the quarterly report up to that date. I am nearly up to 6700 now and am expecting some seed that will take me into the 8000's so you will not have to drop back. I will also advise you of the last number of the motion picture spools.

Just recently, I received a letter from Mr. Ryerson with reference to being of aid to Mr. Fred Taylor who was coming to Japan to study uses of cotton. While Suyetake and I were at Kobe Monday, I called at the Consulate about quitting time and saw the Consul. It seems Mr. Taylor had arrived and was looking the ground over. I told the Consul of Mr. Ryerson's letters to each of us and if I could be of help I would be glad to do anything I could. The Consul did not think I could be of much help as Mr. Taylor was interested only in uses of cotton and expected to spend his time at cotton mills. I also learned that the Dupont Company of the U. S. had instructed their agent at Kobe to find out about the uses of the soybean in Japan. The agent told the Consul that he was not having much luck in finding many uses. By the way, before I forget it, the Consul advised me that Mr. Stephan, Vice-Consul at Keijo, was married, in October I think, and is on

leave in the U.S.

The holidays were passed rather quietly by us at Tokyo. We arrived the night of the 23rd so Margaret did not have much of a Christmas. I spent the entire Christmas day in getting up the November expense account. As yet I have not finished the December account, but hope to within a few days. My February check has not shown up yet and so far Joe has no trace of it only that it was mailed me. A letter from him in November said that the check had not been returned to the Treasury, so I guess it just vanished somewhere between Washington and Dairen.

With reference to the form for persimmon note taking, I do not see that I can add anything as you seemed to have covered the essential features. I do hope, though, that your "one more hunch" will give the desired colored reproductions of the persimmons, for I think they would be mighty nice to go along with the storage data you secure.

Many thanks for the clippings you have sent. From all accounts, I guess Washington will look like a foreign country when we return. I had a letter from Westover saying he was going to spend the holidays with Oakley. He said Oakley would never be able to go back to Washington to live. I have feared as much. I have asked permission to stop off and see Oakley for a day or so on my return which wont be long now. I hope he is in condition so that I can have even a short visit. Westover advised that he had to cut down on the number of visitors as he was being "visited to death."

Well, Dorsett, must close as I have just closed a strenuous week of travel and feel more like retiring than writing though, perhaps, you may think from the length of this letter such is not the case. I determined to make up for lost time.

With best regards from all to all,

Very truly yours,

(s) W. J. Morse,
c/o American Consulate,
Tokyo, Japan.

P.S. Tokyo winter climate doesn't suit me. After being here about a week, I caught a slight cold and settled in my ears as last season. Two winter weather records here have been broken, account of snow and low temperature.

UNITED STATES DEPARTMENT OF AGRICULTURE

Bureau of Plant Industry

Washington

January 24, 1931

MEMORANDUM FOR DR. B. T. GALLOWAY.

Dear Dr. Galloway.

I should have acknowledged at an earlier date receipt of the report by Dorsett and Morse on the mint industry in Japan. I had intended to return this to you sooner but have

held it in order that I might bring it to the attention of Dr. Jesse Benjamin of this city, a consulting chemist who in 1923 made an extensive investigation of this Japanese crop for the manufacturers of Vick's salve. Dr. Benjamin came in Monday and read the report and informed me that it is essentially in accord with what he found on his own trip. It has occurred to that if there is no objection we might make a copy of this report for our own files and have either Mr. Dorsett or Mr. Morse furnish us with ~~PICTURE~~ prints of the photographs that are included. I feel that this would make a very useful addition to our files. If no pictures are available we would be glad to have these made from negatives if it is not contrary to your office policy to loan such negatives to other Divisions.

Very truly yours,

(Signed) A.F. Sievers,
Senior Biochemist.

NOTE

June 26, 1931.

Dr. Galloway advises that Mr. Ryerson approves Mr. Sievers retaining the copy he has with the News Paper clipping which was sent along with the report.

D

P. H. Dorsett's Notes.
Saturday, January 24, 1931,
Peiping and Hsiang Tang, China.

This has been another fine day, but rather warm for this time of the year.

Owing to the fact that we adjusted the speed of the thermometer dial clock yesterday to make it run faster, we thought it advisable to go out today and see how it is running.

We left the hotel about 9:00 a.m. and arrived at the persimmon storage yard in Hsiang Tang about 10:30. We are delighted to record the fact that the clock appeared to be all right and the three pens are all making nice records. If these conditions continue we will have the pleasure of removing a fine chart next Friday, January 30th, when we go out.

At 10:30 the stem Centigrade thermometer #3 which we have hanging in the trunk near the self recording clock thermometer, registered 0° . It registered 0° yesterday about the same time.

The persimmons are being sold out pretty fast. Two cart loads and several donkey and men loads went out yesterday and today a half dozen donkey loads and perhaps as many men loads went to Peiping and intervening villages.

We made a few pictures today while at the storage yard. Such as prove to be worth while will follow today's notes.

W. J. Morse's Notes.
Saturday, January 24, 1931,
Tokyo, Japan.

Data was collected on soy sauce in Japan. It was

learned that soy sauce is prepared in nearly 12,000 establishments throughout the Japanese Empire and in addition it is made in private homes, especially farm homes. When five koku (liquid measure) of soy sauce are made, a permit must be obtained from local authorities.

Various sections in Japan are noted for brands of soy sauce such as Noda, Chiba Prefecture, for its "Kikkoman" and "Higeta" soy sauces. In the Kwansai district the "Marukin" soy sauce is made while in the Tatsuno district the light colored soy is made. The various brands are made in slightly different ways regarded as trade secrets by the various companies. Many experiments by chemical laboratories are being conducted to make artificial soy sauce and also to shorten the period of fermentation.

Considerable quantities of Japanese soy sauce are exported, China being the chief market. Recently America and Europe have made increasing demands. In shipping to some countries, especially America, condensed soy sauce is exported, then water added and bottled.



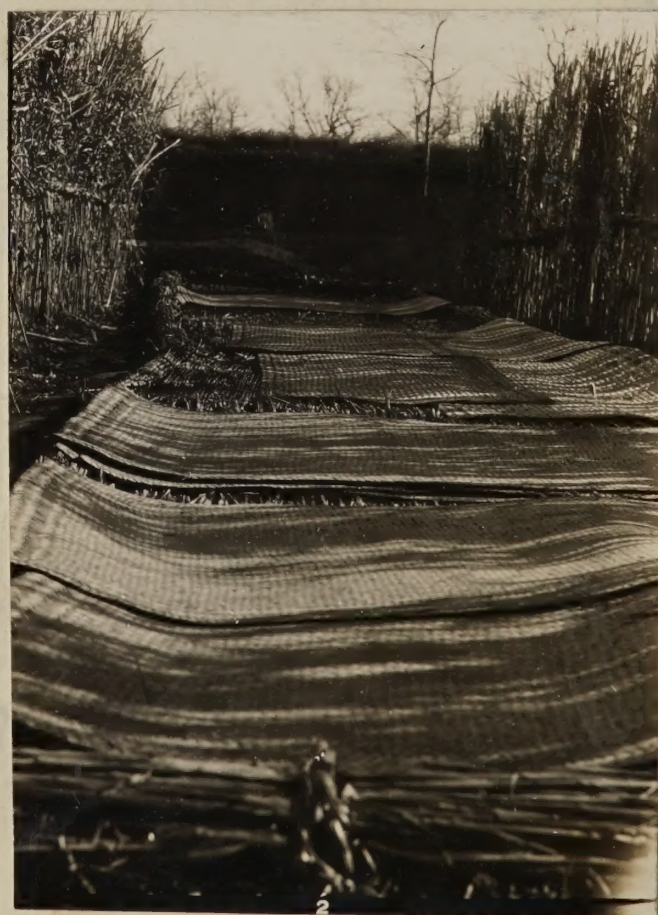
#46455- *Diospyros kaki*, Baskets of persimmon, which with the use of a shoulder pole are carried by men, sometimes many miles the two baskets when filled with persimmons weighs in the neighborhood of 120 pounds. Hsiang Tang, Chihli, China, Jan 24, 1931. D & M



#46456- *Diospyros kaki*
Donkey tanners or baskets
filled with the large Chinese
or "Tanopan" persimmon. This
is at Mr. Chu Li Chi's stora-
yard in the village of Hsiang
Tang, Chihli, China. Jan 24,
1931, D & M



#46457- *Diospyros kaki*, An open air persimmon storage bed with some additional covering of kaoliang stems. This additional covering was for the purpose of holding the fruit frozen for a longer period than was possible with only the single covering of reed-grass matting. This is at the village of Hsiang Tang, Chihli China.



#46458- *Diospyros kaki*, Persimmon open air winter storage beds from which only recently the persimmons have been shipped to market. The reed grass mats are laying on the kaoliang mats or beds on which the persimmons are placed in the early fall.
Jan. 24, 1931. D & M

XXXXXX

Peiping, China.
January 24, 1931.

Mr. B. Y. Morrison,
Senior Horticulturist,
Foreign Plant Introduction,
Bureau of Plant Industry,
U. S. Department of Agriculture,
Washington, D. C.

Dear Mr. Morrison:

Please pardon my delay in not replying to your welcome letters under dates of October 15th, October 22 and December 8th respectively, before now.

My delay in this matter is not the result of a lack of appreciation of your kindness in writing, or of your letters, which were extremely interesting and very much enjoyed. I have simply had a little more to do than I could keep up with and had to let a few things wait for a while.

We are glad the small bamboo katydid cage got through in such good condition. We thought it would be interesting as one of the numerous articles in the bamboo exhibit in "The Go Down" at the Barbour Lathrop Bamboo Garden near Savannah.

By the way, I do not think very much of the name selected for the bamboo building at Savannah. I do not think it is very applicable or calculated to attract the interest of even those who are especially interested in bamboo. Why not call it the "Bamboo Treasure House"? Then one would not have to shift from a poor name to a good thought, but would have the two in one. It is both catchy and appropriate, at least to my way of thinking.

Thanks for the picture of the "Go Down" and also for the post card from Mrs. Fairchild. We are very much gratified to know that they really think the collection as a whole is worth while. We have accumulated a few more things and will try to add to what we have before leaving China.

We are delighted to learn that you found among our pictures some worthy of being reproduced and exhibited as lantern slides, and are especially pleased to learn that they were so favorably received by those who have seen them.

Mr. B. Y. M.

-2-

1-24-31 .

Many thanks for the letter inclosed with yours of October 15th. I presume that long before this our several letters to Doctor Fairchild have caught up with him. If not we fear they never will.

The writing of the history of plant introduction is not only a complicated but also a herculean task, but I do not know of any better qualified or in a better position to undertake the writing of such a book than Doctor and Mrs. Fairchild. We wish them every possible success in this undertaking.

We are much interested in what you wrote concerning "ones enthusiasm rises to hope" in the plant explorer. But what would he be worth, or what would he be able to accomplish without enthusiasm and hope? After all, isn't it quite often the chance happening in plant introduction work which counts?

The early blooming lily of ours which you mention is truly the result of enthusiasm and hope, for we have had nothing else, in so far as I can recall, to influence us in sending it in. If it really proves to be enough earlier than other sorts to make it worth while the contribution to ornamental horticulture is well worth while. What think you?

We will be pleased too, to see what happens to Oriental lilies grown throughout a dry season in America, and hope to be in Washington in time to enjoy this pleasure.

I wish you success in your efforts to secure general lily reports and also in assembling them for publication. Such a paper, I think, would be extremely interesting reading and also very valuable.

You quite well know my limitations and short-comings when it comes to preparing papers for publication, but maybe I can try.

It is a fine thing to learn that the swamp area at the Bell Garden has proven to be of some worth. Why not utilize it for trying out plants such as will succeed under those conditions? This use of the area need not interfere with its usefulness as a source of water supply.

We surely are glad to learn that our collection of tree peonies pleases you. It was sent by chance, or perhaps it would be more correct to say, through enthusiasm and hope. We happened to come upon a bed of quite a large number of varieties of tree peonies in the Botanical Garden a short distance to the west of Peiping. The plants, with but a few exceptions, had flowered this season and the seed

Mr. B. Y. H.

-3-

1-24-31.

was ripe. We learned that one plant produced yellow flowers. Thinking this might be a good chance to get something entirely new and well worth while, we got all the seed we could find and sent it in for trial. We trust something worth while develops from their trial.

Yes, Pinus bungeana is really well worthy of quite a wide distribution in the States. We secured rather small quantities of seed from several exceptionally fine trees, pictures of which we can show you when we return. We trust the seed will germinate and that the young trees will succeed. Do you know how the plant at Chico is progressing? It was 12 or 13 feet in height when I was out there last, some three years ago, and appeared to be doing very well.

Would it not be a nice thing to work up a nicely illustrated article on the Chinese white barked pine for the Horticultural Magazine? It appears to me that it would not only be extremely interesting but also would materially aid in stimulating an interest among plant lovers for trying out this long lived strikingly handsome ornamental pine.

With best wishes, I remain

Very sincerely,

PND:rd.

P. H. Dorsett.

Agricultural Explorer.

Dorsett & Morse Agricultural Expedition.

Washington, D. C.,
October 15, 1930.

Mr. P. H. Dorsett,
c/o American Consul,
Peiping, China.

Dear Mr. Dorsett:

This is not a proper reply to your letter of September 9 but serves only for the purpose of transmitting the enclosed letter from Dr. Fairchild. Somehow through all the vagaries of the various postal departments that must have handled your letters, they have never caught up with him. We have posted him, however, on your progress and will be able to tell him more when he gets down here shortly. A note from Mrs. Fairchild says they are starting south from Baddeck about the 15th of this month. At the present time he is working full tilt on another book about plant introduction in general. I will try to get you a real answer to your letter off tomorrow.

Very truly yours,

(s) B. Y. Morrison,
Senior Horticulturist Acting in
Charge.

Encl.
BYM.R

Washington, D. C.,
October 22, 1930.

Mr. P. H. Dorsett,
c/o American Consul,
Peiping, China.

Dear Mr. Dorsett:

I am going to try this morning to answer properly your two letters of September 9 and 25.

The report of the various plants you have been gathering on your several trips are always interesting. It is astonishing how quickly ones enthusiasm rises to the hope that every collection may show some variation from its fellows. Your note in the letter of September 9 about your lily, D&H 7140 as a possible variation from the ordinary tiger is what prompts me to this remark. A very large proportion of the lilies you have already sent in have turned out to be tiger lilies - very strong growing and handsome ones but, as far as I can tell, absolutely identical from a garden point of view. There are minute variations in the exact hue of the flower, the coloring of the stems, and the amount of tementum that shows in various parts of the plant. There was very little difference in the times of blooming except the one number, which I do not have with me here. This came into bloom, I should say, at least ten days ahead of the rest.

I shall be much interested to see what has happened to the lilies after this summer of perfectly appalling drought. As we are still without rain, it may be that we shall go into the winter in the same terrible condition. If we do, our losses are going to be even worse.

I was fortunate in being able to get very fair pictures of practically all the lilies that were sent in and of most of the ones that we purchased so that we have now American material to go with your own photographs taken in the field. As there is a growing interest in this subject, we have written to a number of people who are also interested in lilies to see whether or not a general list of lily reports might not be assembled that could be published later on in the same Magazine for which you let me have two papers in times past. This has greatly increased in size and in members for the membership of the organization has at last passed the thousand mark. When you finally get back to this country, I am afraid I am going to bother you with requests for other material for that journal.

Mr. Ryerson is not yet back but we expect him the end of this week. His boat comes in, I believe, on the 24th and I rather think he will be immediately on his way to Washington. Paul Russell is back from Mexico as Dr. Reddick has come and gone and has already sent up his first two shipments of material. I think the trip was a pleasant break for Mr. Russell and know that Dr. Reddick was very much pleased with the preliminary work done.

You will be interested to know that the so-called "lake" at Bell has indeed proved a life saver. In spite of our weather and everything else, the water level continues to rise very slowly and yields us enough every day to handle all our greenhouse work and to water all the frames and some of the permanent plantings at wider intervals. Whether or not we shall have difficulties when the rains begin and the water level rises greatly, I do not know but I am inclined to think not and that seems to be Mr. McGrory's opinion. In some ways this creation of a water supply is an improvement over the old swamp area and as soon as its banks are properly planted and covered, may be even more attractive.

The letter telling of your trip up through the region of Tang Shan, the Ming Tombs, etc. awakes a reminiscent feeling with me as I had the pleasure of visiting the Ming Tombs although I did not go to the Great Wall. I can still see very vividly in memory the plains with the great mountains of Shenshi off in the distance and have often regretted that I did not take my courage in my hand and insist on going further.

The most interesting thing for my eye in your letter is the note that you have seeds from tree peonies. This variety has presented all sorts of difficulties in cultivation here in regard to propagation. The Japanese, who are the greatest propagators, have used two root stocks; that of the wild Peonia moutan, which produces hideous magenta-purple flowers, and that of the ordinary deciduous peony. The latter seems to be objectionable in that it is not absolutely compatible with the scions and the former is objectionable because it overgrows the named variety and kills it out as sometimes happens with grafted roses. There have been some difficulties about growing these from seeds, largely because the seeds were too thoroughly dried out before they were sown. We shall certainly do our very best with this lot that you are sending in to see if we cannot get some first hand experience and practice that will be of use to peony people all over the country.

I am also enormously pleased that you got more seed of Pinus bungeana. It would be very splendid if we could get this thing properly established in America. The little plant at Savannah is not happy, possibly because of the summer heats, and there are few reports of the successful growth of the species from the rest of the country. I sus-

-3-

poet it is just one of the things that have "gotten lost in the shuffle".

Now, in order to prevent this turning into a book, I am going to stop.

With kindest personal regards, I am,

Very sincerely yours,

(s) B. Y. Morrison,
BYM.R Senior Horticulturist Acting in Charge.

Washington, D. C.,
December 8, 1930.

Mr. P. H. Dorsett,
Care American Consul,
Peiping, China.

Dear Mr. Dorsett:

The materials that you mention in your letter of November 5 have come in safely. Some of the little sticks in the katydid cage have come loose, but I think they can be clipped back into place without showing signs of wear.

You will be interested to know that Dr. and Mrs. Fairchild stopped in Savannah on their way to Florida and looked into all of the cases of bamboo articles that you gathered for us before. Mrs. Fairchild sent me the enclosed card, which shows you how much pleased she is with the things you collected and the general prospects for developing the museum.

You will see that among ourselves at least we are calling the place "The Go Down", which term I am sure you will recognize. It got its name as the result of a conversation between Mrs. Fairchild, Dr. Merriam, and me at the Grosvenors when Dr. Merriam said that he hoped we would not call it a "museum", as the general public had an inferiority complex when museums were mentioned, so we are going to call it "Go Down" and think of it as a treasure house rather than as a storehouse. Practically all the work in the interior has still to be done in the building, the cases and the setting up of exhibits, but there is no rush for this, and I am anxious that it be exactly right, or as near exactly right as red tape will allow, and of course in this era of extreme caution I hesitate to make any move that will involve the purchase of materials for exhibition cases, or curtains, or Chinese lights. You can imagine how my "efficiency rating" would drop! I am enclosing also a little snap of the building that Mr. Thomas took last spring before we had gotten around to resurfacing the sodded areas and doing some planting. It will give you a little idea as to this somewhat Chinese building sitting in the face of the Bamboo Garden.

We are glad to have news of the Dorsetts and Morses, and to know that all of you are well.

There is nothing particularly exciting going on here except, of course, that we are busier than we have been for a long time. Dr. and Mrs. Fairchild seemed almost aghast at the activities, but at the same time I really think Dr. Fair-

-2-

child is quite happy in the fact that the office is "carrying on."

I think I wrote you last year that I had some of your Japanese garden pictures turned into lantern slides to use at the Annual Meeting of the American Horticultural Society. Since then I have shown them at several small Garden Clubs, and everywhere they have elicited the keenest expressions of delight. I had intended to tell you this before, but do it now.

With kindest personal regards,

Very sincerely,

(s) B. Y. Morrison,
Senior Horticulturist.

BYM-N.
Encls.

XXXXXX

Peiping, China.
January 24, 1931.

Mr. C. Walter Young,
Canby, Minnesota.

Dear Mr. Young:

This communication is to advise you that by yesterday's parcel post I received two spools of Eastman's #10 Panchromatic Standard Motion Picture Negative Film.

This shipment came from Kahn & Company, 54 Geary Street, San Francisco, California, and appears to be in good condition.

I had to pay Mex. \$7.11 Transit Duty on this parcel.

As we are leaving here in March on our return trip to the States, I will be obliged if you will remit the equivalent of the above amount in U. S. Gold, either by check or Post Office Money Order to me c/o Mr. J. L. Mahoney, Foreign Plant Introduction, U. S. Department of Agriculture, Washington, D. C.

I am very much surprised at not having received any word whatever from you since borrowing two spools of Standard Motion Picture Negative Film from me four months ago today. Thanks for their return.

Yours truly,

P. H. Dorsett,
Agricultural Explorer.

PHD/rd.

Copy sent c/o Institute of
Current World Affairs,
522 5th Ave.,
New York City.

P. H. Dorsett's Notes,
Sunday, January 25, 1931,
Peiping, China.

We spent a good part of the day getting our persimmon note records in shape for the records and notes we have to enter in it next Friday when we go out to the persimmon storage yard at Hsiang Tang.

If the weather remains as warm as it has been the past week we expect that the persimmons in the storage beds will all be sold out by March 1st if not before.

It was some colder today and tonight it seems quite a little colder than last night. We found when at the storage yard last Friday and again Saturday that the fruit in the beds was only slightly frozen.

After tiffin we packed and roped two trunks. We are doing our packing as we can find the time so as not to have to do it all at the last moment, for then we will have enough to look after without being bothered with packing.

P. H. Dorsett's Notes,
Monday, January 26, 1931,
Peiping, China.

We spent a good part of the day writing an official letter to Mr. Ryerson relative to parcel post packages numbers 36-P, 37-P, 38-P, 39-P and 40-P, which we plan to deliver to the American Legation to be included in the diplomatic pouch scheduled to leave here Thursday February 5th en route to San Francisco and Washington.

We also completed a special report on the peppermint industry of North Hokkaido, Japan.

W. J. Morse's Notes.
Monday, January 26, 1931,
Tokyo, Japan.

We were advised in the morning that Mr. Suyetake, interpreter, was down sick so the day was spent in writing up the quarterly report and trying to assemble some of the data collected on soybean utilization since our return to this district.

P. H. Dorsett's Notes,
 Tuesday, January 27, 1931,
 Peiping, China.

Completed a special report entitled "Are Grafted Chrysanthemums Worth While in America?" The report deals with grafted chrysanthemums in China, also the wild so-called white and yellow artemisia, seedlings of both of which are almost universally used by the Chinese as stocks upon which they graft their cultured varieties of chrysanthemums.

Also made a start on an illustrated paper entitled "Open Air Winter Forcing of Strawberries." This title, however, is not only subject to change, but quite probably will be either before or by the time the paper is finished.

W. J. Morse's Notes,
 Tuesday, January 27, 1931,
 Tokyo, Japan.

We received at the Consulate this morning a package of 52 samples of soybeans from the director of the Heian Nando Prefecture Seed and Nursery Farm, Heijo, Chosen. The samples represent native varieties collected by the director from farmers in Northeastern Chosen.

Mr. Suyetake came and we spent the day numbering and writing up the samples. Very fortunately the director obtained the native Korean name of each variety. In writing up this group some very interesting types were found. In coming from the Northern section of Korea they should be of some value in our middle and northern States.

U. S. Department of State
 Bureau of Consular Affairs
 Washington, D. C.

Consular Affairs Division

Consular Affairs Division
 Bureau of Consular Affairs
 Washington, D. C.
 no-called office is a private institution, which are almost universally owned by the citizens of the country in which they exist, and which are subject to the laws of the country in which they exist.

Also made a note on an illustrated map entitled "Open Air Market for the Consular Affairs Division". However, it has only subject to change, but since it will be subject to change, it is the same as the one in the past.

U. S. Department of State
 Bureau of Consular Affairs
 Washington, D. C.

It is noted that the Consular Affairs Division is a private institution, which are almost universally owned by the citizens of the country in which they exist, and which are subject to the laws of the country in which they exist.

It is noted that the Consular Affairs Division is a private institution, which are almost universally owned by the citizens of the country in which they exist, and which are subject to the laws of the country in which they exist.

c/o American Consulate,
Tokyo, Japan,
Jan. 27, 1931.

Mr. K. A. Ryerson,
Foreign Plants,
B.P.I., U.S. Dept. of Agric.,
Washington, D. C.

Dear Ryerson:

We are sending you by today's diplomatic pouch parcel packages, Nos. 239 and 240, containing the following items:

Parcel Package No. 239.

Pueraria thunbergiana-nos. 6646, 6647.

Publications -6660-63.

Soja max:

Seed-Nos. 6652-57.

Products-Nos. 6659, 6664-5, 6667-8, 6671.

Parcel Package No. 240.

Soja Max:

Products-Nos. 6670-1.

Motion Picture Spools-Nos. 41 and 56.

Of the products the most interesting is the famous Okazaki Black Miso under numbers 6670 and 6671 which were obtained on a recent trip to Okazaki to learn the process of manufacture. This form of miso is the only one made wholly from soybeans as other forms are made of soybeans and rice. Black miso has been made at the same factory for about three hundred years and no improvements have been made in the methods of manufacture.

It is hoped that the above parcels reach you in good shape and that the miso products will not prove too much for the ones who open the parcels as did the ancient Chinese eggs that Dorsett sent to the office during his previous trip to China.

With best wishes to all, I am

Very truly yours,

W. J. Morse,
Agricultural Explorer,
Dorsett & Morse Agr. Expedition.

P. H. Dorsett's Notes,
Wednesday, January 28, 1931,
Peiping, China.

Worked on pictures and lantern slides and partially completed a short illustrated report on Pinus bungeana, the white barked pine of Peiping and vicinity.

Took the 5x7 camera and went to the Jade Buddha Temple just at the South entrance of the Winter Palace and tried three exposures of a large white pine in the court yard. This is next to the oldest and largest specimen of white pine we have seen in our travels.

J. H. Bennett's House
 Wednesday, January 20, 1910
 Beijing, China.

Worked on pictures and Indian slides and especially
 completed a small illustrated report on Tibet. The
 the white painted line of Peking and vicinity.
 Took the 3rd train and went to the Lake Hotel
 Temple just at the south entrance of the Great Wall and
 tried three exposures of a large wall gate in the west
 gate. This is next to the Great Wall and beyond
 of white line we have seen in our travels.



#46459- *Pinus bungiana*, White-bark Pine of China, Jan, 28, 1931. D & M

View of a very fine 700 year old specimen of the Chinese white-bark pine at the Temple of the White-jade Buddha at the South entrance of the Winter Palace, Peiping, Chihli, China.

This tree is 172 inches in circumference at about 12 or 13 inches from the ground, and 50 feet or more in height. See from this tree was sent into the Department under #7426. Mr. Peter Liu our Chinese interpreter stand at the left of the tree facing the camera.



346460- *Pinus bungeana*, Che Chinese White-bark Pine.
 A different view from the one shown under #46459. The tree measures
 some 175 inches in diameter at 12 to 18 inches above the ground. The
 bark is very white and the specimen is a very fine one.

F. H. Dorsett's Notes,
Thursday, January 29, 1931,
Peiping, China.

The weather has been fine all week with a gradual trend upward in temperature. The maximum temperature for Monday the 26th was 36° F above zero, while today it was 53° above zero F.

We hope tomorrow will be pleasant for we leave for the persimmon storage yard at Hsiang Tang at nine o'clock in the morning where we go to change charts on our recording thermometer and also to make weights, measurements and notes on eight different lots of persimmons which are under observation.

We worked practically all day on our pictures and enlargements and with our trip report for November which has been typed and ready for paging with the exception of Mr. Morse's expense account for the month, which has not yet come to hand.

W. J. Morse's Notes,
Thursday, January 29, 1931,
Tokyo, Japan.

Professor Okazaki of the Tokyo Agricultural College had arranged with Dr. K. Aso, chief of the Bacteriology Department of the Tokyo Imperial College of Agriculture an appointment for us this morning. In addition to the study of legume bacteria, Dr. Aso also conducts experiments with legumes. We found that he visited Washington, D. C., last year and is well acquainted with Drs. Shreiner, Woods and Kellerman.

Japan's green manure crops are represented by Genge

clover (*Astragalus sinicus*), also called Chinese Winter Vetch, and the soybean. Genge clover is grown as a winter crop on the rice paddies while the soybean is grown as a summer crop in the uplands and also in the rice paddies in certain sections.

The acreage of genge clover occupies about 65 per cent of the total area of all green manure crops in Japan. The seed is sown in late summer or early fall in the rice paddy after the water is drawn off. When the crop is in full bloom, about the middle of May, the plants are turned under entirely for green manure, or cut for forage. When used for forage, the plants are cut somewhat high so that a fair amount of green material is turned under. Soybeans are planted in May between the rows of wheat or barley when the wheat or barley are just heading. When the bean plants are in bloom, they are turned under, generally the middle part of June.

According to the investigations of Dr. Aso, the nodule bacteria of genge clover are smaller than those of soybeans, peas, and other legumes. The optimum PH value of pure culture media for the growth of the bacteria of genge clover is between 6.5 and 7.5, the limiting value being 4.7. It is also said that the nodules produce some acids which are of a higher acidity than those produced by other kinds of nodule bacteria. These may be reasons why genge has not succeeded in America. It is apparently an acid soil legume and when inoculated with the proper culture and grown on the proper acid soils may have great value for green manure purposes. Dr. Aso promised to give us pure culture of genge that we

W. J. Morse's Notes,
January 29, 1931 (continued).

might send to the Department.

We were taken to the greenhouses and had explained to us the work being conducted with pure cultures of legumes. Some work has been done with different strains of soybean bacteria and several strains of Bacillus radicicola have been isolated. We found that no work had been done with the bacteria of the wild soybean (*Soja ussuriensis*), in fact they did not seem to know the species. They thought it would be well to try out the pure culture of the species in comparison with the cultured soybean and will carry on experiments this summer and fall. We were given several publications relating to legume culture and green manure experiments.

P. H. Dorsett's Notes,
Friday, January 30, 1931,
Peiping and Hsiang Tang, China.

It was about 8:50 this morning when we left the hotel and 10:30 or thereabouts when we arrived at the persimmon storage yard at Hsiang Tang.

The weather today has been exceptionally pleasant and even though the trips are getting rather long and tiresome we enjoyed the ride.

Upon opening up the trunk in which the thermometer is installed we found that our readjustment of a week ago helped a lot but was not enough for the clock ran about four hours slow during the week.

We shifted the lever again today but have no means of telling whether it will be enough or not.

We likely will ride out again next Monday so as to be able to tell whether or not we will again have to shift to higher speed.

The stem thermometer #3 registered at 10:30 this morning 4° above zero Centigrade.

The following is a rough estimate of the footage of Mr. Chi's persimmon beds and the footage of fruit left in each bed:

<u>No. of Beds.</u>	<u>Length in Ft.</u>	<u>Footage of fruit in bed.</u>	<u>Empty footage.</u>
1	60	54	6
1	60	00	60
1	60	30	30
1	60	00	60
1	60	54	6
1	60	00	60
1	39	9	30
1	39	00	39
1	45	00	45
1	78	00	78
1	45	40	5

(cont. on next page.)

No. of Beds.	Length in Ft.	Footage of fruit in bed.	Empty footage.
1	45	40	5
1	18	18	00
1	18	18	00
1	45	40	5
1	45	10	35
1	45	22	23
822 Linear Ft.		335	487

It was about 1:30 when we finished up our work of weighing and calipering the fruit. None of the fruit is frozen hard enough to rattle, but some persimmons are frozen much harder than others.

Mr. Chi told us today that it has been an unusually warm winter and that on account of this, and other causes, (fruit ripening early in the fall and not enough cold weather to hold it for market, lower prices than last year, etc.) that he stands to lose about \$600.00 Mex. this season.

Prices, he said, are about the same as they were last week. If a man does not have to sell, the prices are for 1st grade \$7.80 per 1000; 2nd grade \$7.30 per 1000; and 3rd grade \$5.00 per 1000. If a man needs the money these prices will be shaded.

Mr. Chi's average daily sales are running just now about 15,000 fruit per day. He estimates that he has sold something like 450,000 fruit.

It was about four o'clock this afternoon when we got back to the hotel in Peiping.

W. J. Morse's Notes.
Friday, January 30, 1931,
Tokyo, Japan.

For some time we have been trying to locate the company manufacturing "Soyamint" which we had heard of several times

W. J. Morse's Notes,
January 30, 1931, continues.

but no one seemed to know where the factory was located in the Tokyo District. At last Mr. Suyetake found that the product was being manufactured by the Japan Fertilizer Co.

We called at the main office and met one of the directors, Mr. Koshiro Horie. He advised that his company supplies 65% of the commercial fertilizers used in Japan. One of the principal by-products from the manufacture of fertilizers is used with soybean oil meal in producing an artificial soy sauce. The process of manufacture is more or less secret so that it is not possible to visit the factory.

As yet "Soyament" is not on the market in large quantities as it is of only recent manufacture. It is said that soy sauce can be made in slightly over one month with this process, allowing one month for curing. It has quite a different flavor from that of soy sauce and it may take some time to establish it on the market. It can be produced much more cheaply than the ordinary soy and being cheaper may help it to take more quickly with the poorer classes. Mr. Horie gave us some literature on the uses of Soyament and also promised to send us samples of the two grades of products that are being manufactured, which differ principally in specific gravity.

We learned of two cooking schools in the Kanto District and visited both. Although closed for the day, we learned that they teach various methods of using miso, tofu, and soy sauce. The principals of both schools advised they would be glad to have us visit the schools and would give

information as to various foods prepared from the soybean products.

P. H. Dorsett's Notes,
Saturday, January 31, 1931,
Peiping, China.

Went to Hartung's Photo Shop in the forenoon and worked on pictures and special short papers the rest of the morning.

After tiffin Liu and I visited the Shun Cheng Fire Cracker Factory outside of the Hatamen Street Gate.

We went primarily to get information about the use of Abutilon avicennae "Ch'ing Ma" stem charcoal used in making fire crackers. We not only found this is being done, but also learned that 8,000 to 10,000 catties (about 10,000 to 12,500 pounds) of this charcoal is being used annually by the eight fire cracker concerns in Peiping. The price of this charcoal is ten cents Mex. per cattie.

We were told that "Ch'ing Ma" stem charcoal is used in all fire crackers and noisy fire works, but that for non-noisy displays willow charcoal is used.

We also found them winding the paper tubes with raw Ch'ing Ma fiber. We had not heard of this use of Ch'ing Ma fiber before.

We secured small samples of powder made of Ch'ing Ma stem charcoal, also charcoal, paper tubes finished and showing the wrapping with fiber, and in addition some of the finished fire crackers. These we will send to Washington as exhibits.

We learned that the "Ch'ing Ma" stem charcoal is burned in the village of Sha Ku Tsui, some twenty miles or so to the southeast of Peiping. We plan, if possible to get down to this village in the near future to see what we can and also to get additional information and some pictures

of the stock, kilns and operations.

In our notes concerning the "Ch'ing Ma" powder and charcoal, we have suggested that the War and Navy Departments may be interested in this product, and also that the section or division handling gas masks might like a small portion of the charcoal for experimental purposes.

W. J. Morse's Notes,
Saturday, January 31, 1931,
Tokyo, Japan.

We visited the botany department of the Imperial Botanic Gardens and found that Drs. Nakai and Makino were both down with influenza. However, we met Professors Matsuzaki and Honda who gave us much information and some publications concerning wild legumes and grasses in the Japanese Empire.

With reference to the wild soybean, both botanists stated that they knew of only one species, Soja ussuriensis. They had not found or heard of Soja tomentosa or Soja gracilis which Professor Skwartzow of Harbin, Manchuria, said occurred in Manchuria. They are inclined to believe that the two species are varieties of S. ussuriensis.

Professor Honda who has done much work with legumes and grasses said that there is only one species of Zoysia throughout Japan, Chosen and Manchuria, and this Zoysia pungens. The Zoysia in Chosen and Manchuria are simply forms of Zoysia pungens. We are under the impression that when we visited Dr. Nakai last February (1930) he advised us that there are two species. The hardy form found in Chosen and Manchuria is Zoysia pungens var. Japonica whereas the tender

W. J. Morse's Notes,
January 31, 1931 (continued).

form found in the warm sections of Japan is Zoysia pungens.

After our visit to the Botanic Gardens, we visited some market sections. At some we found soybean sprouts (6 in. long) in small bundles. At present there is a great abundance of puffed roasted soybeans in the various markets. These are used on bean-scattering day (Mame-maki) which comes on February 4th this year. We found many posters announcing bean-scattering ceremonies at many shrines and temples in and around Tokyo.

The first of these is the fact that the
 January 1, 1972 (continued)
 has been found in the same position of the
 after our visit to the National Bureau, so that
 with a few days more it will be in the
 same position as before. It is now in the
 (C. M. Long) is still in the same position.
 The second of these is the fact that the
 position of the first printed system in the same position.

There are now no more systems in the same position.
 The third of these is the fact that the
 position of the first printed system in the same position.

The fourth of these is the fact that the
 position of the first printed system in the same position.

The fifth of these is the fact that the
 position of the first printed system in the same position.

The sixth of these is the fact that the
 position of the first printed system in the same position.

The seventh of these is the fact that the
 position of the first printed system in the same position.

The eighth of these is the fact that the
 position of the first printed system in the same position.

The ninth of these is the fact that the
 position of the first printed system in the same position.

The tenth of these is the fact that the
 position of the first printed system in the same position.

The eleventh of these is the fact that the
 position of the first printed system in the same position.

The twelfth of these is the fact that the
 position of the first printed system in the same position.

The thirteenth of these is the fact that the
 position of the first printed system in the same position.

Standard form #1039
Approved by Comptroller
General U. S.
October 19, 1926.

STATEMENT TO ACCOMPANY
ACCOUNTS RENDERED UNDER
AN ADVANCE OF FUNDS

Date: February 4, 1931.

Account of F. H. Dornett, under an advance of funds made under travel
authority No. 312-P, dated July 1, 1930, and under bond dated

Date submitted	Period covered	Amount advanced	
		Expended and not previously reimbursed:	Amount
11-19-30	10-2 to 10-31-30.		\$400.50
12-10-30	11-1 to 11-30-30.		430.92
1-10-31	12-1 to 12-31-30.		409.57
2-4-31	1-1 to 1-31-31.		419.76
Total:			<u>\$2,660.75</u>
Balance due United States kept in Nat. City Bank of N.Y.			<u>\$2,339.25</u>

I certify that the foregoing is a correct statement of my account, and that I will continue in a travel status until early in May 1931 and that I will have further need for this advance.

Signature _____

Agricultural Explorer.
(Official title)

ITEMIZED SCHEDULE OF TRAVEL AND OTHER EXPENSES

1. Give duty status on first day of voucher period:

* Arrived at Yokohama, Japan on March 18, 1929.for temporary duty for approximate period indefinite.Approximate date of return to official headquarters May 1, 191.2. State authorized allowance for per diem in lieu of subsistence: \$1.003. State authorized allowance for actual subsistence expenses: Not to exceed \$ † per day.

* If authority provides for travel to more than one point, time of arrival and departure from each should be stated in the body of the account in chronological order.

† If more than one rate of allowance is authorized, full statement of application of each rate must be given in some convenient place on this voucher.

DATE	CHARACTER OF EXPENDITURE (To be itemized by the day and fully explained)	SUB- VOU. NO.	AMOUNT		NOTES
			SUBSISTENCE	OTHER	
1921 January.			U.S. \$	Max. \$	
1	Riksha for Mr. Liu, official.			40	
1	1 cattle Lepodera seed, collected at Fa Hua Su.			2 00	
	Riksha to Te Sheng Men to get seed, official.			60	
2	Road toll to Hsiang Tang and ret. to Peiping.			1 10	
	40 Persimmons for notes & experiments, official/ \$.015 ea.			60	
3	1 Dozen H.B. Lead pencils @ 1.20 per doz. official			1 20	
	1 Chinese pen for marking persimmons.			20	
	Chinese ink box for ink for marking persimmons.			35	
	Chinese ink for marking persimmons.			30	
	Riksha for Liu, official.			60	
	Official postage.			1 52	
5	Parcel post, official.			11 97	
	Riksha for Liu, official.			60	
	self, official \$6.70 ea.				
	2, 1st class tickets Peiping-Tientsin, Liu and /			13 40	
	Lv. Peiping 4:20 P.M. ar. Tientsin 7:30 P.M.				
	Hotel porter Peiping handling 3 pes. offic. bagg.			40	
	Sta. coolie Tientsin handling 3 pes. offic. bagg.			40	
	Auto Sta. Tientsin to hotel, Liu, self & 3 pes./			1 50	
	Hotel porter Tientsin handling 3 pes. offic. bagg.			50	
	Riksha, Tientsin, Liu, official.			55	
6	Bundle of Ch'ing Ma fiber, official.			80	
	8 sz. bags of beans & peas \$.025. official.			20	
	16 samples Chinese Ch'ing Ma imitation silk 2.16 ea. official (Unable to secure voucher.)			34 65	
	official.				

Auto for 1 day locating & collecting samples/		20 00	
Hotel porter Tientsin handling 3 pcs. offic. bag.		50	7077
Sta. porter " " " " " "		40	
offic. bagg.			
Auto hotel to sta. Tientsin Liu, self & 3 pcs./		1 50	
6.70 ea.			
2, 1st C. tickets Tientsin-Peiping, Liu & self./		13 40	
Riksha for Liu, Tientsin, official.		60	
Lv. Tientsin 3:50 P.M. Ar. Peiping 7:20 P.M.			
Hotel porter Peiping handling 3 pcs. offic. bagg.		40	
Riksha for Liu, official.		70	
Official postage.		20	
2 Balls cotton twine, official @.45		90	
ages, official. @.14			
10 Yds. white cotton cloth for sewing up pack-		1 40	
1 Doz. pen points, official use.		10	
Peter Liu.	1	6 00	
Parcel post, official.		3 75	
Road toll to Hsiang Tang, official.		1 10	
50 Persimmons for notes & records, official @.015		75	
official.			
Hotel coolie carrying persimmons to attic room/		30	
Hung Hsing Stationery Co.	2	17 70	
25			
50 Seedling persimmon trees, official @ .60 ea.		15 00	
Official postage.		1 38	
Riksha for Mr. Liu, official.		40	
Hartung's Photo Shop.	3	175 15	
Yu Yuan Stationery Co.	4	5 00	
Official postage.		45	
Riksha for Mr. Liu, official.		50	
Official postage		47	
Riksha for Liu & self @.50 ea.		1 00	
Northern Printing C.	5	4 00	
		346 89	
		346 89	

TOTALS (to be carried forward to Continuation Sheet, if necessary)

TOTAL AMOUNT OF VOUCHER (not to be used when totals are carried forward to Continuation Sheet)

[illegible]

MEMORANDUM OF TRAVEL PERFORMED UPON TRANSPORTATION REQUESTS

Peter Liu

Peiping, China
January 8, 1931

Per diem allowance on
official trip to
Tientsin. Lv. Pei-
ping 4:20 P.M. Jan.
5th Arrive back in
Peiping 7:20 P.M.
Jan. 7, 1931
@ 2.666 per day. 6 00

6 00

8th

January 1931

P. H. Dorsett
Six and no/100

Yu Yuan Stationery Co.
Peiping, China.
January 13, 1931.

1000 sheets
second sheet type-
writing paper @
.005 5 00

5 00

13 th

January 1931
P. H. Dorsett
Five and no/100

3
+
Hartung's Photo Shop
Peiping, China.
January 12, 1931

Photo work and supplies
as follows: Jan. 2,
6 tubes photo paste,
official @.80 ea. 4 80
Dev. $\frac{1}{2}$ doz 5x7 negs.
@.70 per dozen. 35
24 prints 5x7 @.20 4 80
Jan. 5. 520 prints
3x4 $\frac{1}{2}$ @.08 41 60
Jan. 9. 168 panorama
prints 3x12 @.25 42 00
Jan. 12, 1931. 68
colored lantern slides
@ 1.20 81 60
175 15

12 th
January 1931
P. H. Dorsett
One-Hundred seventy-five and
15/100 Dollars.

5
Northern Printing Co.
Peiping, China.
January 16, 1931.

Printing 400
forms for per-
mission records @
1.00 per 100 4 00
Official.

4 00

16 th
January 1931
P. H. Dorsett
Four and no/100

China Garage.
Peiping, China.
January 30, 1931.

Official use
auto as follows:
Jan. 2, 1931, Hsiang Tang
and return to Peiping 15 50
Jan. 9, 1931, Hsiang
Tang and return. 15 50
Jan. 16, 1931, Hsiang
Tang and return. 15 50
Jan. 23, Hsiang Tang
and return. 15 50
Jan. 24, Hsiang Tang
and return. 15 50
Jan. 30, Hsiang Tang
& return. Above trips 15 50
visiting persimmon
storage yard. Official, 93 00
L.C.

30th

January 1931
P. H. Dorsett
Ninty-three and no/

Hartung's Photo Shop
Peiping, China
January 30, 1931

Official
Photo work as follows.
Jan. 16, 1931. 14 black
and white slides @ .70 9 80
5 Autochrom pictures
of persimmons @ 3.80 19 00
94 Prints 5x7 @ .20 18 80
187 " 3 1/2 x 4 1/2 @ .08 14 96
Jan. 19. Dev. 2 doz.
3 1/2 x 4 1/2 negatives @ .45 90
88 prints 3 1/2 x 4 1/2 @ .08 7 04
Jan. 30. Dev. 3 films
5x7 @ .058 17
23 prints 5x7 @ .20 4 60
5 Enlarges 9x11 colored 11 00
@ 2.20 86 27

30th

January 1931
P. H. Dorsett
Eighty-six and 27/100

Yung Hsin Stationery
Co. Peiping, China.
January 9, 1931.

1 Fahrenheit
thermometer, maximum
and minimum 9 50
1 Centigrade & Fah-
renheit thermometer.
Both for official
use in carrying on
persimmon investi-
gations. 8 20

17 70

9th

January 1931
P. H. Dorsett
Seventeen and 70/100

P. H. Dorsett.

31.

January.

U.S. \$ Mex. \$
346 89

16	Road toll Haiang Tang & return.	1 10
	Official postage.	55
	tions, official, 2nd grade \$.01	
	50 Perambons for notes & observa-/	50
	Riksha for Liu, official.	20
17	Riksha for Liu & self, official \$.50	1 00
	Chinese florist cutting bulbs to dem- onstrate the practice of dwarfing, & 6 bulbs used in demonstration, offic.	4 00
19	Riksha for Liu, official.	40
	Official postage.	73
20	50 large letter envelopes \$.01, offic.	50
21	Riksha for Liu, official.	50
	1 sheet cardboard 24"x30", official.	06
22	Sm. box glued mending tape, official.	1 25
	Riksha for Liu, official.	20
23	Road toll Haiang Tang and ret. offic.	1 10
	.015 50 Perambons for notes & records @/	75
24	Road toll to Haiang Tang & ret. offic.	1 10
	Riksha for Liu, official.	40
	Official postage.	99
26	Riksha for Liu, official.	40
		50
28	Riksha for Liu, official.	1 00
	\$.50 Rikshas Liu & self to Pei Hai, offic./ Entrance fee at Jade Buddha grounds for getting pictures of white barked pine. Self & Liu, official. \$.20	40

P. H. Dorsett

Foreign Plant Introduction.

January 1

January 31, 1931.

Peiping,
China.

Worked on field trip report.
wrote official correspondence.
Numbered up field trip
report.

Peiping,
China.

Went to Hsiang Tang to
porcelain storage yard to
secure temperature readings
notes and pictures. Worked with porcelain data.

Peiping,
China.

Worked on December expense
account. Worked with
porcelain notes and
data.

c/o U. S. Legation, Peiping, China.

P. H. Dorsett

Foreign Plant Introduction.

January 1

January 31, 1931.

- | | | |
|----|----------------------------------|---|
| 4 | Peiping,
China. | Spent practically entire day listing and packing trunks. |
| 5 | Peiping,
China. | Visited Legation in regard to Pass Ports. Attended to official duties. Left Peiping for Tientsin at 4:20 P.M. Ar. Tientsin 7:30 P.M. |
| 6 | Tientsin,
China. | Spent the day collecting seed samples and information and samples of products of Ch'ing Ma, Abutilon. Wrote up material collected. |
| 7 | Tientsin &
Peiping,
China. | Spent the day collecting seed samples and information and samples of Ch'ing Ma products. Lv. Tientsin 3:50 P.M. Ar. Peiping 7:20 P.M. |
| 8 | Peiping,
China. | Worked on notes and December expense account. Packed plant material for shipment to Washington. |
| 9 | Peiping,
China. | Visited persimmon storage yard at Hsiang Tang to secure information, temperature records and pictures. Weighed and calipered persimmons, made notes on our experiments. |
| 10 | Peiping,
China. | Spent the day making experiments in defrosting and refreezing of persimmons. |

c/o U. S. Legation, Peiping, China.

P. H. Dorsett

Foreign Plant Introduction.

January 1

January 31, 1931.

- | | | |
|----|--------------------|---|
| 11 | Peiping,
China. | Worked on experiments with
defrosting and refreezing
of persimmons. |
| 12 | Peiping,
China. | Continued notes and observations
on defrosting and refreezing of
persimmons. |
| 13 | Peiping,
China. | Worked on field trip report and
on pictures for albums.
Wrote official correspondence. |
| 14 | Peiping,
China. | Made notes and observations on
persimmons. Worked on
Ch'ing Ma samples and data.
Wrote official correspondence. |
| 15 | Peiping,
China. | Wrote official correspondence.
Worked with pictures, Ch'ing
Ma samples and data, and attended
to other official matters. |
| 16 | Peiping,
China. | Visited persimmon storage yard
to secure temperature records, information
and pictures. Weighed and calipered persimmons,
made notes and observations on them. |
| 17 | Peiping,
China. | Worked on pictures for albums,
numbered field trip report,
attended to other official
matters. |

c/o U. S. Legation, Peiping, China.

P. H. Dorsett

Foreign Plant Introduction.

January 1

January 31, 1931.

- | | | |
|-----|--------------------|---|
| 18 | Peiping,
China. | Spent the entire day mounting
pictures in albums. |
| 19 | Peiping,
China. | Mounted pictures in albums.
Worked on data concerning
Ch'ing Ma. |
| 20. | Peiping,
China. | Worked with pictures and
on Ch'ing Ma data and
specimens. |
| 21. | Peiping,
China. | Worked on report, negatives,
lantern slides. Packed a
parcel post package of seed
and plant material. |
| 22 | Peiping,
China. | Made notes on persimmons.
Wrote official correspondence,
attended to other official
matters. |
| 23 | Peiping,
China. | Visited persimmon storage yard at
Hsiang Tang to secure information,
temperature records, pictures, etc.
Weighed and calipered persimmons.
Wrote official correspondence. |
| 24 | Peiping,
China. | Wrote official correspondence.
Worked on persimmon notes and data.
Visited Hsiang Tang Persimmon storage yard,
made adjustments on clock-thermometer. |

c/o U. S. Legation, Peiping, China.

P. H. Dorsett

Foreign Plant Introduction.

January 1

January 31, 1931.

Peiping,
China.

Worked on persimmon notes.
Packed and roped two trunks.

Peiping,
China.

Wrote official correspondence.
Worked on special report
on persimmon industry of
Hokkaido, Japan.

Peiping,
China.

Worked on special reports,
completed one and began another.

Peiping,
China.

Worked on pictures and lantern slides.
Almost completed another special
report.

Peiping,
China.

Worked practically all day on
pictures and enlargements,
worked on trip report.

Peiping,
China.

Visited persimmon storage yard at
Hsiang Tang, secured temperature records,
information and notes. Weighed and
calipered persimmons.

Peiping,
China.

Worked on special reports.
Secured data, information and
samples of Ch'ing Ha products.

c/o U. S. Legation, Peiping, China.

W. J. Morse.

312-P

Feb. 7, 1939.

July 1, 1931

Feb 9, 1931.

4,000.00

3/8/30
9/20/30
12/26/30
1/16/31
2/9/31

2/1/30-2/28/30
8/1/30-8.31/30
11/1/30-11/30/30
12/1/30-12/31/30
1/1/31-1/31/31

334.78
429.52
482.65
508.02
403.84

2158.81
1,841.19

In March, 1931

Agricultural Explorer.

Public Voucher for Reimbursement of Travel and Other Expenses
Including Per Diem

Voucher No. _____
No. _____

GENERAL ACCOUNTING OFFICE
PREAUDIT
Certified for payment in the
sum of \$ _____
J. R. McCARTL,
Comptroller General of
the United States.
By _____

U. S. Foreign Plant Industry
Appropriation: _____
THE UNITED STATES, D. C.
To _____
c/o American Consulate, Tokyo, Japan
Domicile _____
Residence _____
Official Headquarters _____

PAID BY

(For use of the Postal Service only)

FOR REIMBURSEMENT of travel and other expenses incurred in the discharge of official duty

From January 1, 1931, to January 31, 1931,

as per itemized statement within, under authority No. 512-P, dated July 1, 1931,

(ACCOUNTING CLASSIFICATION)

(Payee will NOT use this space)
Differences _____

Account verified; correct for \$ _____

(Signature or initials)

AMOUNT

Dollars _____

Cents _____

403 84

NOTATIONS

(Payee must not use this column)

(Additional statements by Department, Bureau, or Establishment, if deemed necessary)

CHARACTER OF EXPENDITURE
(To be itemized by the day and fully explained)

AMOUNT

OTHER

SUBSISTENCE

NOTATIONS

MEMORANDUM

Agricultural Explorer.

Paid by _____
Check No. _____, dated _____, 19____, for \$ _____
Cash, \$ _____, on _____, 19____

on _____, 19____

for \$ _____

in favor of payee named above

on Treasurer of the United States

MEMORANDUM—DO NOT SIGN

ITEMIZED SCHEDULE OF TRAVEL AND OTHER EXPENSES

1. Give duty status on first day of voucher period:

* Arrived at _____ on _____, 19____
 for temporary duty for approximate period _____
 Approximate date of return to official headquarters _____, 19____

2. State authorized allowance for per diem in lieu of subsistence: \$ _____

3. State authorized allowance for actual subsistence expenses: Not to exceed \$ _____ per day.

* If authority provides for travel to more than one point, time of arrival and departure from each should be stated in the body of the account in chronological order.
 † If more than one rate of allowance is authorized, full statement of application of each rate must be given in some convenient place on this voucher.

DATE 19____	CHARACTER OF EXPENDITURE (To be itemized by the day and fully explained)	SUB- VOU. NO.	AMOUNT		NOTATIONS (Payee must not use this column)
			SUBSISTENCE	OTHER	
31					
2	official postage			36	
3	4 pieces of also preserved fish & meat for photos			50	
3	3 pkgs. soybean yuba for Dept. Agr. exhibit			75	
6	ry. fare (3-C) Iurakucho Sta. Tokyo to Sakurag- icho Sta. Yokohama and return-interpreter & self.			1 76	
6	st. car fare-ry. sta. to shipping office-Yokohama- interpreter & self.			14	
6	bus fare (no st. car) to Seed Co. Plant-Yokohama- interpreter & self-and return to sta.			40	
7	official postage			26	
8	ry. fare (3-C) Iurakucho Sta. to Oji Sta. Tokyo and return-interpreter & self.			60	
10	st. car fare-Hibiya to Shibuya and return-inter- preter & self.			23	
10	bus fare-Shibuya to Tokyo Imperial Agr. Coll. and return-interpreter & self.			20	
10	st. car fare-Aoyama to Hibiya-interpreter and self.			14	
10	official postage			56	
11	ry. fare (2-C) Tokyo Sta. Tokyo to Kyoto-interpreter and self.			23 42	
11	express fare (2-C) Tokyo, Sta., Tokyo to Kyoto- interpreter and self.			4 00	
11	2 lower berths (2-C) Tokyo Sta., Tokyo to Kyoto- interpreter and self.			9 00	
11	taxi-hotel to Tokyo Sta. with official cameras and luggage-interpreter & self.			1 00	
11	left Tokyo Sta. Tokyo at 3.25 P.M.				
11	arr. Kyoto at 7.25 A.M.				
11	sta. porter fee to carry luggage-Kyoto			50	
11	transfer-baggage from sta. to hotel, Kyoto.			50	
11	ry. fare (3-C) Kyoto to Kobe Sta. Kobe-interpreter and self.			2 33	
11	express fare (3-C) Kyoto to Kobe Sta. Kobe-inter- preter and self.			1 30	
11	left Kyoto at 9.47 A.M.				

(To be used at discretion of Department, Bureau, or Establishment)

[illegible]

GOVERNMENT PRINTING OFFICE

10-1664a

7092

Public Voucher for Reimbursement of Travel and Other Expenses
Including Per Diem—Continuation Sheet

7093

MEMORANDUM

Payee

ITEMIZED SCHEDULE OF TRAVEL AND OTHER EXPENSES

DATE 19 31	CHARACTER OF EXPENDITURE (To be itemized by the day and fully explained)	SUB- VOUCHER NUMBER	AMOUNT		NOTATIONS (Payee must not use this column)
			SUBSISTENCE	OTHER	
	<i>Brought forward</i>			80 85	
15	transfer-official luggage-ry.sta. to inn--Okazaki			.50	
16	taxi-Okazaki to miso factory & Anjo			4 00	
16	exper.sta. and return.			1 20	
16	2 boxes of black miso for Dept. soy-bean exhibit. Okazaki.			2 00	
16	2 small tubs Okazaki miso for Dept. soybean exhibit. Okazaki.			1 30	
16	express tickets(3-C) Okazaki to Tokyo sta. Tokyo-interpreter & self.			50	
16	transfer-official luggage from inn to ry.sta. Okazaki.				
16	left Okazaki at 2.07 P.M.				
16	arr. Tokyo sta. Tokyo at 8.25 P.M.				
16	sta.porter to carry official luggage at Tokyo sta.			50	
16	Taxi-Tokyo sta. to hotel with official luggage. Tokyo.			1 90	
17	st.car fare-Hibiya to Tokyo Customs office & return-interpreter & self.			28	
17	official postage			46	
19	15 sheets wrapping paper for wrapping parcel post packages.			60	
19	2 balls of cord for tying parcel post packages.			30	
19	developing film pack-12 expos.- 3 1/2 X 4 films.			60	
19	12 prints-3 1/2 X 4			1 20	
19	official postage			86	
20	ry.fare(3-C) Iurakucho sta. to Tachikawa Sta. & return-interpreter & self.			2 84	
21	official postage			16	
21	bus fare-Hibiya to Hongo section & return-interpreter & self.			84	
21	freight, drayage, etc.-4 boxes official material-Dairen to Yokohama.	1		20 54	
21	ry.fare(3-C) Iurakucho sta. to Chiba			2 83	
22	& return-interpreter & self.				
22	left Iurakucho sta. at 8.45 A.M.				

DATE
1931

CHARACTER OF EXPENDITURE
(To be itemized by the day and fully explained)

SUB-
VOUCHER
NUMBER

SUBSISTENCE

OTHER

AMOUNT

NOTATIONS
(Payee must not use
this column)

arr. Chiba at 10.25 A.M.

left Chiba at 5.02 P.M.

arr. Iurakuchō sta. at 6.35 P.M.

st. car fare-Nippon to Chiba and re-

turn-Interpreter & self

due fare-Chiba sta. to initial exp. etc.

and return-Interpreter & self.

due fare-Chiba to Iurakuchō sta. coll.

turn-Interpreter & self.

st. car fare-Nippon to Kanda section & re-

turn-Interpreter & self.

st. car fare-Nippon to Katsukawa-in-

terpreter & self.

st. car fare-Nippon to Chiba-in-

terpreter & self.

st. car fare-Nippon to Chiba-in-

terpreter & self.

st. car fare-Nippon to Chiba-in-

terpreter & self.

st. car fare-Nippon to Chiba-in-

terpreter & self.

st. car fare-Nippon to Chiba-in-

terpreter & self.

st. car fare-Nippon to Chiba-in-

terpreter & self.

st. car fare-Nippon to Chiba-in-

terpreter & self.

st. car fare-Nippon to Chiba-in-

terpreter & self.

st. car fare-Nippon to Chiba-in-

terpreter & self.

W. J. Morse

Foreign Plant Introduction.

January 1

January 31

31.

1931

- 1 Tokyo, Japan. Worked on December expense account and quarterly report.
- 2 Tokyo, Japan. Worked on quarterly report and soybean data. Wrote official correspondence.
- 3 Tokyo, Japan. Visited Asukusa District looking up soybean products.

W. J. Morse

Foreign Plant Introduction.

January 1

January 31

31

1931

- | | | |
|----|-------------------------------|--|
| 4 | Tokyo,
Japan. | Worked on quarterly report
and soybean data. |
| 5 | Tokyo,
Japan. | Collected data on soybean
also preserved products. |
| 6 | Yokohama,
Tokyo,
Japan. | Visited Yokohama Shipping
Co. re freight shipments from
Dairen to Yokohama. Visited
Seed Co. re Kudzu in Japan. |
| 7 | Tokyo,
Japan. | At the Imperial Dept of Agr.
regarding use of soybeans
and oil cake in Japan. |
| 8 | Tokyo,
Japan. | Visited Nishigahara Exper. Sta.
concerning soybeans and
plant breeding. |
| 9 | Tokyo,
Japan. | Visited shinjuku section
looking up special soybean
products. |
| 10 | Tokyo,
Japan. | Visited Imperial Coll. of
Agr. and also Hongo District
for soybean products. |

W. J. Morse

Foreign Plant Introduction.

January 1

January 31

31.

1931

- 11 Tokyo, Japan. Wrote official correspondence.
Left Tokyo Sta. 8.25 P.M.
- 12 Kyoto, Kobe, Japan. Visited Kobe Pre Agr. Dept for soybean data and miso meat preserving factories. Arr. Kyoto at 7.25 A.M. Lft. Kobe at 9.47 A.M. Arr. Kobe at 11 A.M. Lft. Kobe at 7.47 P.M. Arr. Kyoto at 9.30 P.M.
- 13 Kyoto, Japan. Visited Kyoto Imperial Coll. of Agr. and also miso and natto factories.
- 14 Himeji, Tatsuno, Japan. Collected data on soybean oil cake experiments at exper. sta. near Himeji. Collected data on soy sauce in the Tatsuno District.
- 15 Kyoto, Japan. Visited farming sections near Kyoto. Left Kyoto at 4 P.M. Arr. Okazaki at 9.27 P.M.
- 16 Anjo, Okazaki, Japan. Collected data on black miso at factory and data on soybean oil cake feeding experiments at Anjo exper. sta. Left Okazaki at 2.07 P.M. Arr. at Tokyo Sta. Tokyo at 8.25 P.M.
- 17 Tokyo, Japan. Visited S.M. Ry. Agr. Office re soybean work. At the Japanese Customs with regard to passing of trunks through Customs.

W. J. Morse

Foreign Plant Introduction.

January 1

January 31

31.

1931

- | | | | |
|----|----------------------|---|---|
| 18 | Tokyo,
Japan. | Wrote up soybean products and publications. | |
| 19 | Tokyo,
Japan. | Wrote up and packed parcel packages of seed and products for shipment to the Department. | |
| 20 | Tachikawa,
Japan. | Visited Hog Breeding Farm to collect data on feeding experiments with soybean oil cake. | |
| 21 | Tokyo,
Japan. | Collected data on the uses of soybean and soybean products in Japan at the Institute of Physical and Chemical Research. | |
| 22 | Chiba,
Japan. | Visited Imperial Animal Husbandry Sta. to collect data on uses of soybeans as feed for cattle, hogs and poultry. | Lft. Iurakucho Sta. Tokyo at 8.45 A.M.
Arr. Chiba at 10.25 A.M.
Lft. Chiba at 5.02 P.M.
Arr. Iurakucho 6.35 P.M. |
| 23 | Tokyo,
Japan. | Visited Imperial Coll. of Agr. with regard to use of soybeans for animal feed in Japan. | |
| 24 | Tokyo,
Japan. | Wrote up data on soy sauce and miso products in Japan. | |

W. J. Morse

Foreign Plant Introduction.

January 1

January 31

31.

1931

- 25 Tokyo, Japan. Wrote up quarterly report and wrote up soybean data.
- 26 Tokyo, Japan. Wrote on quarterly report soybean data regarding products.
- 27 Tokyo, Japan. Wrote up soybean seed samples and publications.
- 28 Tokyo, Japan. Put up parcel packages of seed and products. Worked on publications.
- 29 Tokyo, Japan. Visited bacteriology and botany depts. of Imperial Agr. Coll. with regard to legume cultures and wild legumes.
- 30 Tokyo, Japan. Collected data at Soyament Co. re use of soybean cake meal in manufacture of soy sauce. Visited cooking schools re soybean foods.
- 31 Tokyo, Japan. Visited Imperial Botanic Gardens re wild soybeans and wild legumes.

TEMPERATURE RECORD IN ATTIC ROOM

In Hotel des Wagons-Lits.

Peiping Chihli, China.

January 1-31, 1931

Date	Hour.	Max	Min	Date	Hour	Max	Min
		F	F			F	F
1	9.45 A M	57	57	17	9.15 A M	55	53
	8.45 P M	58	57		8.45 P M	53	53
2	8.00 A M	57	57	18	9.00 A M	55	52
	9.00 P M	57	57		9.20 P M	55	50
3	9.15 A M	57	55	19	8.50 A M	55	53
	9.15 P M	57	55		9.10 P.M	58	53
4	8.45 A M	57	55	20	9.20 A M	58	53
	9.10 P M	62	57		10.00 P M	58	50
5	9.05 A M	60	57	21	9.10 A M	58	52
	-				9.45 P M	53	52
6				22	9.15 A M	50	50
6					8.45 P M	51	50
				23	8.30 A M	50	47
7					9.00 P M	56	44
	9.00 P M	62	53	24	8.30 A M	53	53
8	9.30 A M	56	53		9.00 P M	60	53
	9.15 P M	56	48	25	9.10 A M	59	55
9	8.00 A M	52	24		9.00 P M	59	52
	9.00 P M	56	11	26	9.00 A M	51	44
10	9.00 A M	36	32		9.00 P M	51	39
	9.15 P M	44	33	27	9.00 A M	57	47
		44	41		9.00 P M	57	48
11	9.50 A M	48	43	28	9.00 A M	53	52
	9.50 P M	48	39		9.15 P M	57	52
12	9.00 A M	44	37	29	9.00 A M	51	48
	9.00 P M	40	32		8.45 P M	56	52
13	9.00 A M	44	34	30	8.30 A M	56	53
	8.20 P M	48	39		9.00 P M	64	55
14				31	8.45 A M	70	57
15	9.15 A M	52	47		9.15 P M	60	57
	9.40 P M	53	52				
15	9.00 A M	58	53				
	9.00 P M	60	53				
16	8.35 A M	55	47				
	9.00 A M	60	50				

MAXIMUM AND MINIMUM TEMPERATURE
out side of our Office window at the Grand Hotel des
Wagons-Lits, January 9-31 inc. 1931.

Date . Hour . Max . Min . Date . Hour . Max . min .

9 .8.30 P M .2 6 F. 2 6 F.

10	8.30 A M	38	6	22	9.15 A M	32	26
10	6.15 P M				9.50 P M	48	26
11							
11	8.30 A M	38	6	23	8.40 A M	39	30
11	10.00 P M	19			9.00 P M	54	33
112	9.15 A M	24	8	24	8.30 A M	34	22
	P M				9.00 P M	63	32
13	8.30 A M	32	20	25	9.00 A M	37	28
	8.20 P M	40	34		9.10 P M	38	20
14	8.20 A M	42	28	26	9.00 A M	22	11
	9.40 P M	38	30		9.00 P M	36	16
15	9.00 A M	32	22	27	9.00 A M	28	14
	9.00 P M	54	23		9.10 P M	48	20
16							
16	8.10 A M	38	26	28	9.00 A M	34	18
	9.00 P M	56	26		9.15 P M	50	20
17	9.00 A M	36	22	29	9.00 A M	38	26
	9.00 P M	52	27		8.45 P.M	38	35
18	9.00 A M	38	26	30	8.35 A M	54	30
	9.25 P M	56	36		9.00 P M	58	32
19	9.00 A M	66	28	31	8.45 A M	56	36
	9.00 P M	54	32		9.15 P M	44	32
20	9.15 A M	38	27				
	9.08 P M	42	35				
21	10.30 A M	44	24				
	8.30 P M	37	28				

